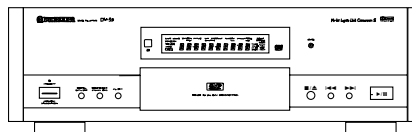


# Service Manual

**PIONEER**  
The Art of Entertainment



ORDER NO.  
**RRV1944**

DVD PLAYER

# DV-09

# DV-S9

**THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).**

Type	Model		Power Requirement	Region restriction code (region number)
	DV-09	DV-S9		
KU/CA	○	—	AC120V	1
L/TA	—	○	AC110V	3

- Refer to the service guide RRV1896 for DV-505.
- IC information is described in the service guide.

## CONTENTS

1. SAFETY INFORMATION .....	2	7. GENERAL INFORMATION .....	67
2. EXPLODED VIEWS AND PARTS LIST .....	3	7.1 PARTS .....	67
3. SCHEMATIC DIAGRAM .....	14	7.1.1 IC .....	67
4. PCB CONNECTION DIAGRAM .....	34	7.1.2 DISPLAY .....	73
5. PCB PARTS LIST .....	49	7.2 DISASSEMBLY .....	74
6. ADJUSTMENT .....	58	7.3 BLOCK DIAGRAM .....	78
		8. PANEL FACILITIES AND SPECIFICATIONS .....	79

**PIONEER ELECTRONIC CORPORATION** 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153-8654, Japan  
**PIONEER ELECTRONICS SERVICE, INC.** P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.  
**PIONEER ELECTRONIC (EUROPE) N.V.** Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium  
**PIONEER ELECTRONICS ASIACENTRE PTE. LTD.** 501 Orchard Road, #10-00 Wheelock Place, Singapore 238880  
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T – ZMM APR. 1998 Printed in Japan

# 1. SAFETY INFORMATION

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.

Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.



## WARNING

Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5).

When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.



## NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols  (fast operating fuse) and/or  (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

## REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible  (fusible de type rapide) et/ou  (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

### IMPORTANT

THIS PIONEER APPARATUS CONTAINS LASER OF CLASS 1. SERVICING OPERATION OF THE APPARATUS SHOULD BE DONE BY A SPECIALLY INSTRUCTED PERSON.

### LASER DIODE CHARACTERISTICS

MAXIMUM OUTPUT POWER : 7 mw  
WAVELENGTH : 650 nm

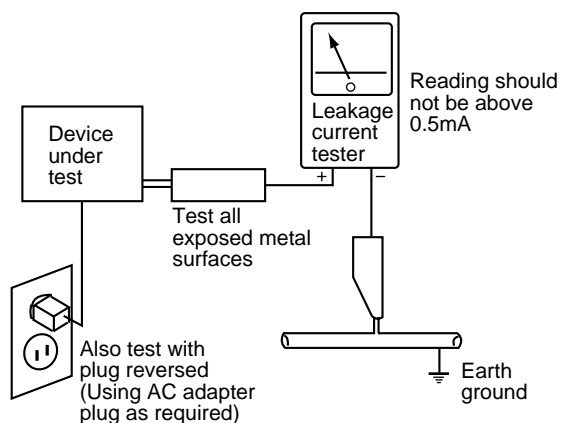
## (FOR USA MODEL ONLY)

### 1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

#### LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

### 2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a  $\Delta$  on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

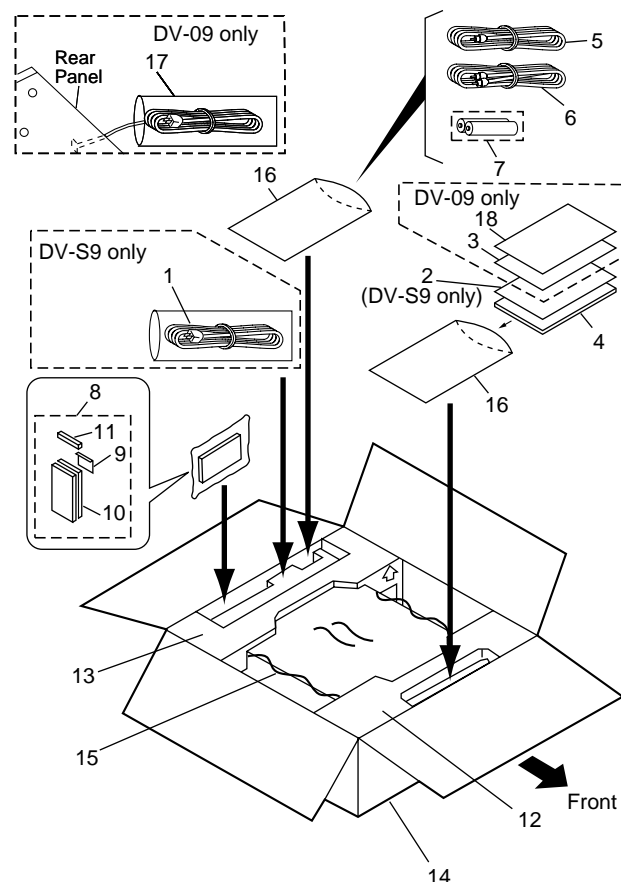
Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

## 2. EXPLODED VIEWS AND PARTS LIST

**NOTES:**

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The  $\triangle$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Screws adjacent to  $\blacktriangledown$  mark on product are used for disassembly.

### 2.1 PACKING



#### (1) PACKING PARTS LIST

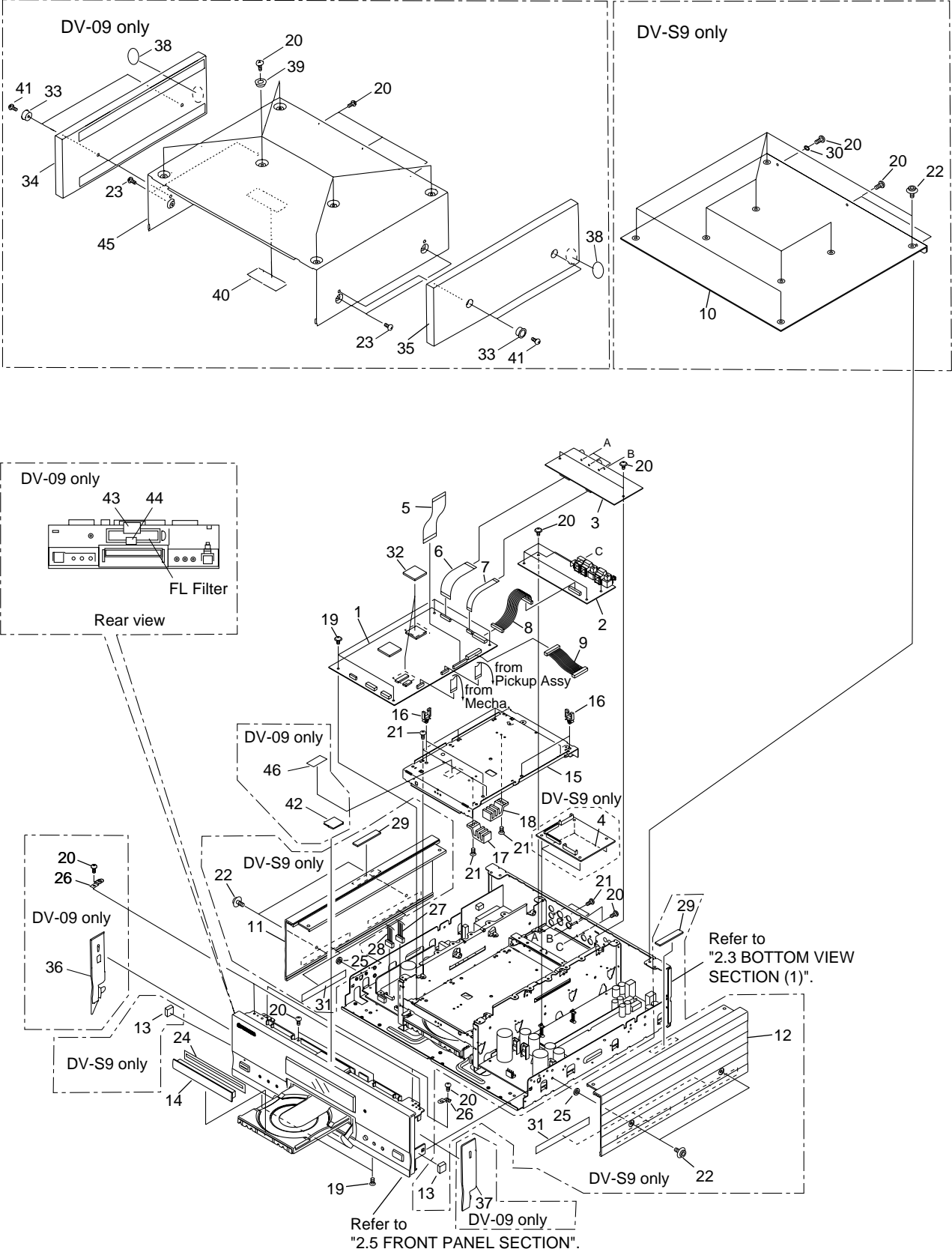
Mark	No.	Description	Part No.
$\triangle$	1	Power Cord	See Contrast table (2)
NSP	2	Regular User's Card	See Contrast table (2)
NSP	3	Warranty Card	See Contrast table (2)
	4	Operating Instructions	See Contrast table (2)
	5	Audio Cord (L=1.5m)	VDE1023
	6	Video Cord (L=1.5m)	VDE1024
NSP	7	Dry Cell Battery (R03, AAA)	VEM-022
	8	Remote Control Unit	See Contrast table (2)
	9	Battery Cover	See Contrast table (2)
	10	Case (Below)	See Contrast table (2)
NSP	11	Filter	VNK2063
	12	Pad (F)	See Contrast table (2)
	13	Pad (R)	See Contrast table (2)
	14	Packing Case	See Contrast table (2)
	15	Mirror Mat Sheet	VHL1018
	16	Polyethylene Bag (0.03x230x340)	Z21-038
	17	Mirror Mat Bag	See Contrast table (2)
NSP	18	Caution Card	See Contrast table (2)

#### (2) CONTRAST TABLE

DV-09/KU/CA and DV-S9/L/TA are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			DV-09 /KU/CA	DV-S9 /L/TA	
$\triangle$	1	Power Cord	Not used	ADG7013	
NSP	2	Regular User's Card	Not used	VRY1110	
NSP	3	Warranty Card	ARY1026	Not used	
	4	Operating Instructions (English)	VRB1188	Not used	
	4	Operating Instructions (Chinese)	Not used	VRC1071	
	8	Remote Control Unit (CU-DV011)	VXX2532	Not used	
	8	Remote Control Unit (CU-DV010)	Not used	VXX2525	
	9	Battery Cover	DNK2286	VNK4177	
	10	Case(Below)	VNK2062	VNK4178	
	12	Pad (F)	VHA1218	VHA1210	
	13	Pad (R)	VHA1219	VHA1211	
	14	Packing Case	VHG1733	VHG1754	
	17	Mirror Mat Bag	VHL1004	Not used	
NSP	18	Caution Card	VRN1011	Not used	

2.2 EXTERIOR SECTION





**(1) EXTERIOR SECTION PARTS LIST**

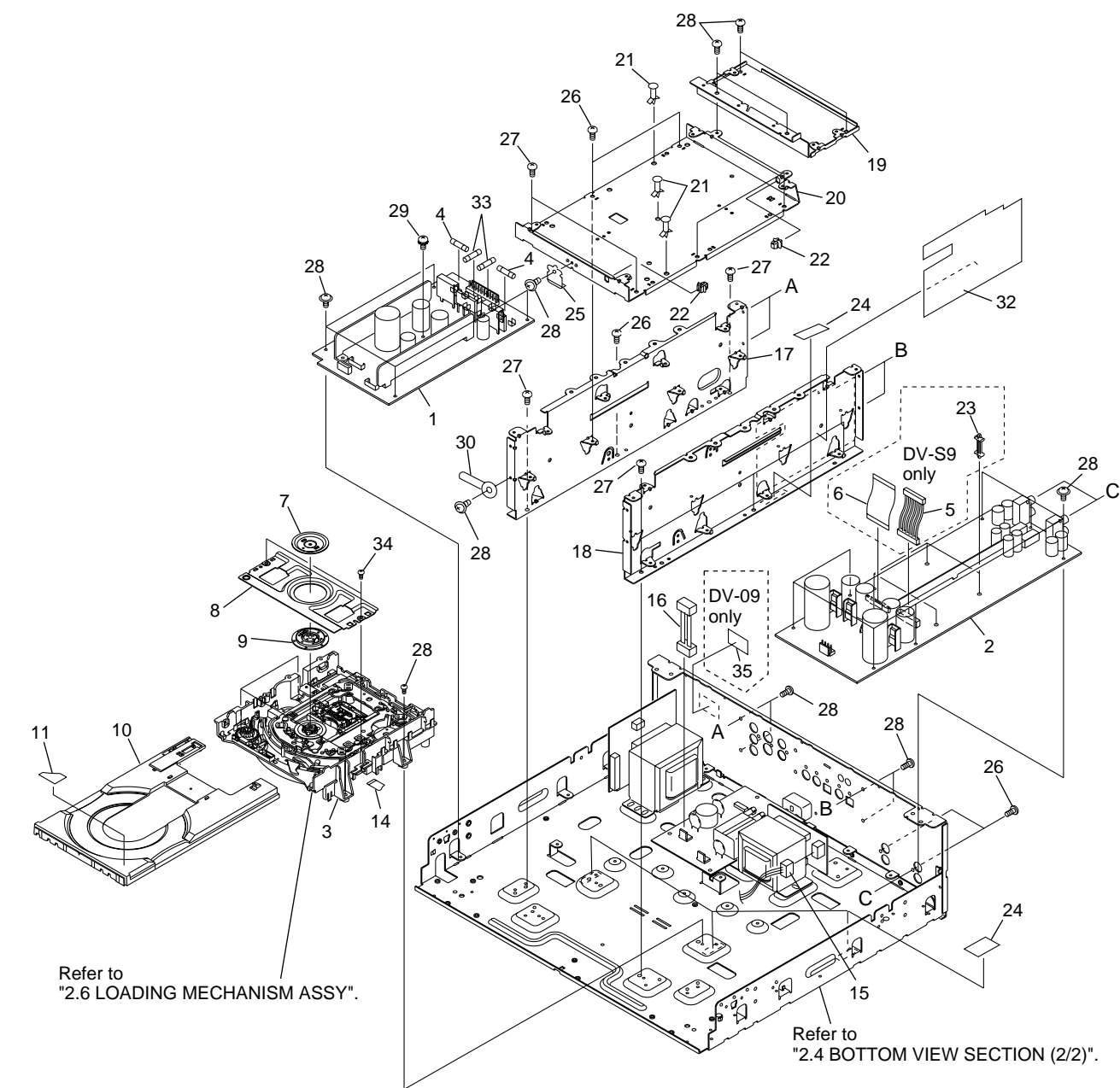
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	DVD MAIN Assy	VWS1337		24	Door Packing	VEC1995
	2	DOUT Assy	See Contrast table (2)		25	Washer	See Contrast table (2)
	3	VOUT Assy	VWG1905		26	Top Stay	VNE2139
	4	DIRB Assy	See Contrast table (2)		27	Housing Assy (7P) (DVD MAIN CN502-SYPS CN32)	VKP2177
	5	Flexible Cable (28P)	See Contrast table (2)		28	Housing Assy (8P) (DVD MAIN CN501-SYPS CN33)	VKP2170
	6	Flexible Cable (19P) (DVD MAIN CN508-VOUT CN601)	VDA1666		29	Damper	See Contrast table (2)
	7	Flexible Cable (9P) (DVD MAIN CN507-VOUT CN602)	VDA1665		30	Washer	WH30FUC
	8	Housing Assy (12P) (DVD MAIN CN506-DOUT CN701)	VKP2173		31	Cushion	See Contrast table (2)
	9	Housing Assy (13P)	See Contrast table (2)		32	Gap Pad	VEC1997
	10	Top Aluminum	See Contrast table (2)		33	Wood Coller	See Contrast table (2)
	11	Side Aluminum L	See Contrast table (2)		34	Side Wood L	See Contrast table (2)
	12	Side Aluminum R	See Contrast table (2)		35	Side Wood R	See Contrast table (2)
NSP	13	Cushion	See Contrast table (2)		36	Gold Mole L	See Contrast table (2)
	14	Tray Panel	See Contrast table (2)		37	Gold MoleR	See Contrast table (2)
	15	Main Shield	VNE2137		38	UL Caution Card	See Contrast table (2)
NSP	16	Wire Clip	VEC1181		39	Washer	See Contrast table (2)
	17	FTS Heat Sink	VNH1053		40	65 Label	See Contrast table (2)
	18	AV1 Heat Sink	VNH1052	NSP	41	Screw	See Contrast table (2)
	19	Screw	BBP30P080FMC	NSP	42	Rubber Spacer	See Contrast table (2)
	20	Screw	ABZ30P080FCC	NSP	43	Spacer A	See Contrast table (2)
	21	Screw	BBT30P080FCC	NSP	44	Spacer B	See Contrast table (2)
	22	SH Screw	See Contrast table (2)		45	Bonnet S	See Contrast table (2)
	23	Screw	See Contrast table (2)		46	Fuse Caution Label	See Contrast table (2)

**(2) CONTRAST TABLE**

DV-09/KU/CA and DV-S9/L/TA are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			DV-09 /KU/CA	DV-S9 /L/TA	
NSP	2	DOUT Assy	VWG1902	VWG1901	
	4	DIRB Assy	Not used	VWG1897	
	5	Flexible Cable (28P)	VDA1663	VDA1662	
	9	Housing Assy (13P)	VKP2172	VKP2171	
	10	Top Aluminum	Not used	VAH1288	
	11	Side Aluminum L	Not used	VAH1286	
	12	Side Aluminum R	Not used	VAH1287	
	13	Cushion	Not used	DEB1115	
	14	Tray Panel	VNK4242	VNK4241	
	22	SH Screw	Not used	PBA1049	
NSP	23	Screw	BBZ40P080FZK	Not used	
	25	Washer	Not used	WA85F170M160	
	29	Damper	Not used	VEB1172	
	31	Cushion	Not used	VEC1996	
	33	Wood Coller	PNW1238	Not used	
	34	Side Wood L	VAP1032	Not used	
	35	Side Wood R	VAP1033	Not used	
	36	Gold Mole L	VAH1295	Not used	
	37	Gold MoleR	VAH1296	Not used	
	38	UL Caution Card	AAX-313	Not used	
NSP	39	Washer	ABE1009	Not used	
	40	65 Label	ORW1069	Not used	
	41	Screw	PBA1038	Not used	
NSP	42	Rubber Spacer	VEB1252	Not used	
	43	Spacer A	VEB1287	Not used	
NSP	44	Spacer B	VEB1288	Not used	
	45	Bonnet S	VXX2582	Not used	
	46	Fuse Caution Label	VRW1728	Not used	

2.3 BOTTOM VIEW SECTION (1/2)



**(1) BOTTOM VIEW SECTION (1/2) PARTS LIST**

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
NSP △	1	SYPS Assy	VWR1289	△	16	Housing Assy (3P) (LSFB CN2-TRSB CN21)	See Contrast table (2)
	2	AUDIO Assy	See Contrast table (2)		17	Side Wall L	VNE2135
	3	Loading Mechanism Assy	VWT1150		18	Side Wall R	VNE2136
	4	Fuse (FU3, FU4 : 3A)	REK1080		19	Trans. Shield	VNE2138
	5	Housing Assy (13P) (AUDIO CN101-DIRB CN811)	See Contrast table (2)		20	Main Shield	VNE2137
	6	Flexible Cable (28P) (AUDIO CN111-DIRB CN812)	See Contrast table (2)	NSP	21	Card Spacer	QEC1012
	7	Clamper Plate	VNE2068		22	PCB Fixing Base	DEC1231
	8	Bridge	VNE2069		23	PCB Holder	See Contrast table (2)
	9	Clamper	VNL1738		24	Sheet	VEX1022
	10	Tray	See Contrast table (2)		25	Earth Plate B	VBK1076
	11	Tray Label	VRW1628		26	Screw	BBT30P080FCC
	12	•••••			27	Screw	BBZ30P060FZK
	13	•••••			28	Screw	ABZ30P080FCC
	14	Flexible Cable (12P) (LOSB CN301-DVD MAIN CN107)	VDA1664		29	Screw	BBP30P080FMC
	15	Housing Assy (4P) (AUDIO CN351-TRSA CN12)	See Contrast table (2)		30	Cord Clamper	RNH-184
				△	31	•••••	
					32	Sheet	VEC1991
					33	Fuse (FU5, FU6 : 2A)	REK1078
					34	Screw	BPZ26P080FZK
					35	Fuse Caution Label	See Contrast table (2)

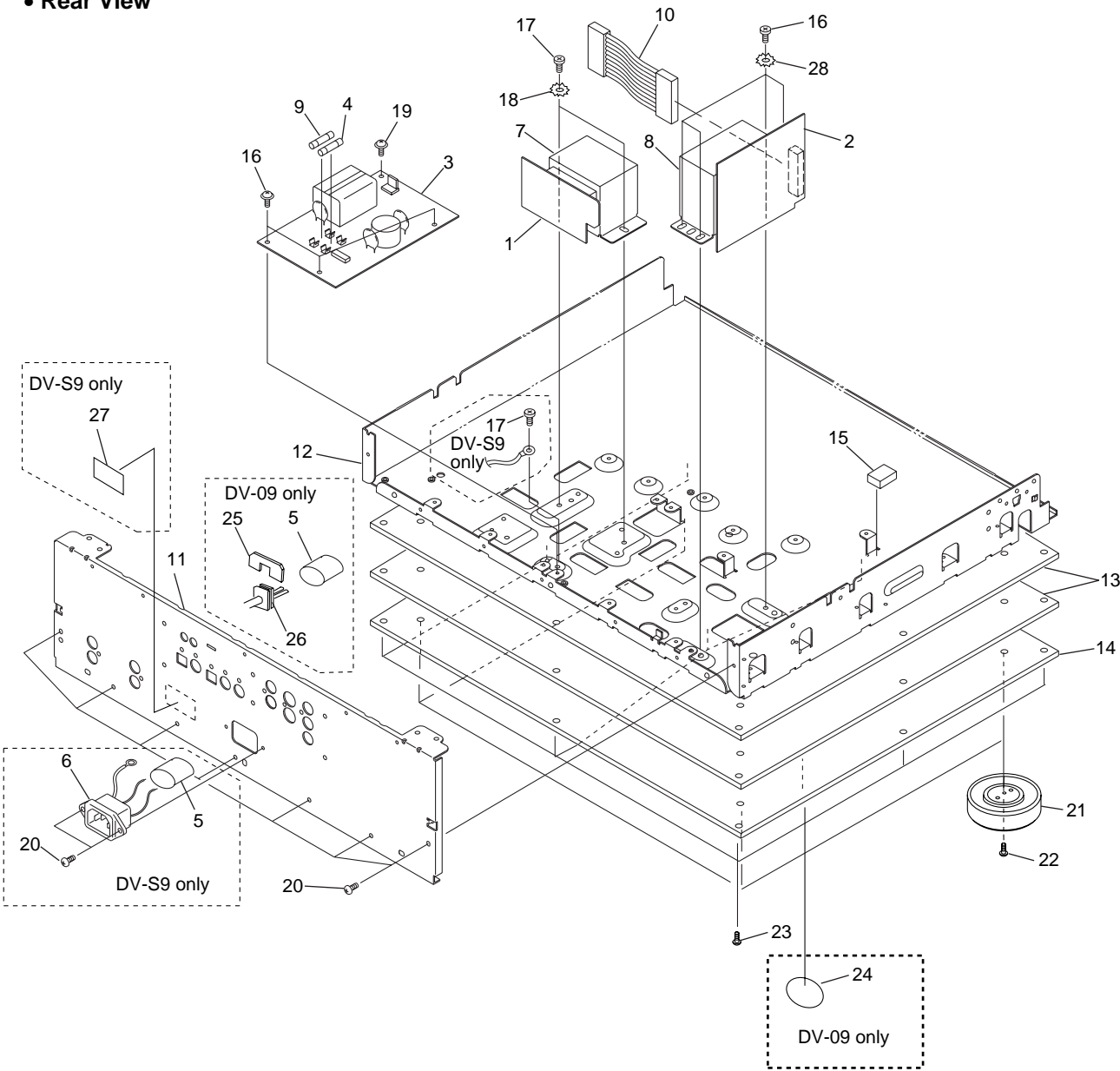
**(2) CONTRAST TABLE**

DV-09/KU/CA and DV-S9/L/TA are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			DV-09 /KU/CA	DV-S9 /L/TA	
△ NSP	2	AUDIO Assy	VWV1591	VWV1590	
	5	Housing Assy (13P)	Not used	VKP2171	(AUDIO CN101-DIRB CN812)
	6	Flexible Cable (28P)	Not used	VDA1662	(AUDIO CN111-DIRB CN811)
	10	Tray	VNK4244	VNK4243	
	15	Housing Assy (4P)	VKP2185	VKP2187	(AUDIO CN351-TRSA CN12)
	16	Housing Assy (3P)	VKP2192	VKP2166	(LSFB CN2-TRSB CN21)
	23	PCB Holder	Not used	VEC1624	
	35	Fuse Caution Label	VRW-548	Not used	

2.4 BOTTOM VIEW SECTION (2/2)

• Rear View



**(1) BOTTOM VIEW SECTION (2/2) PARTS LIST**

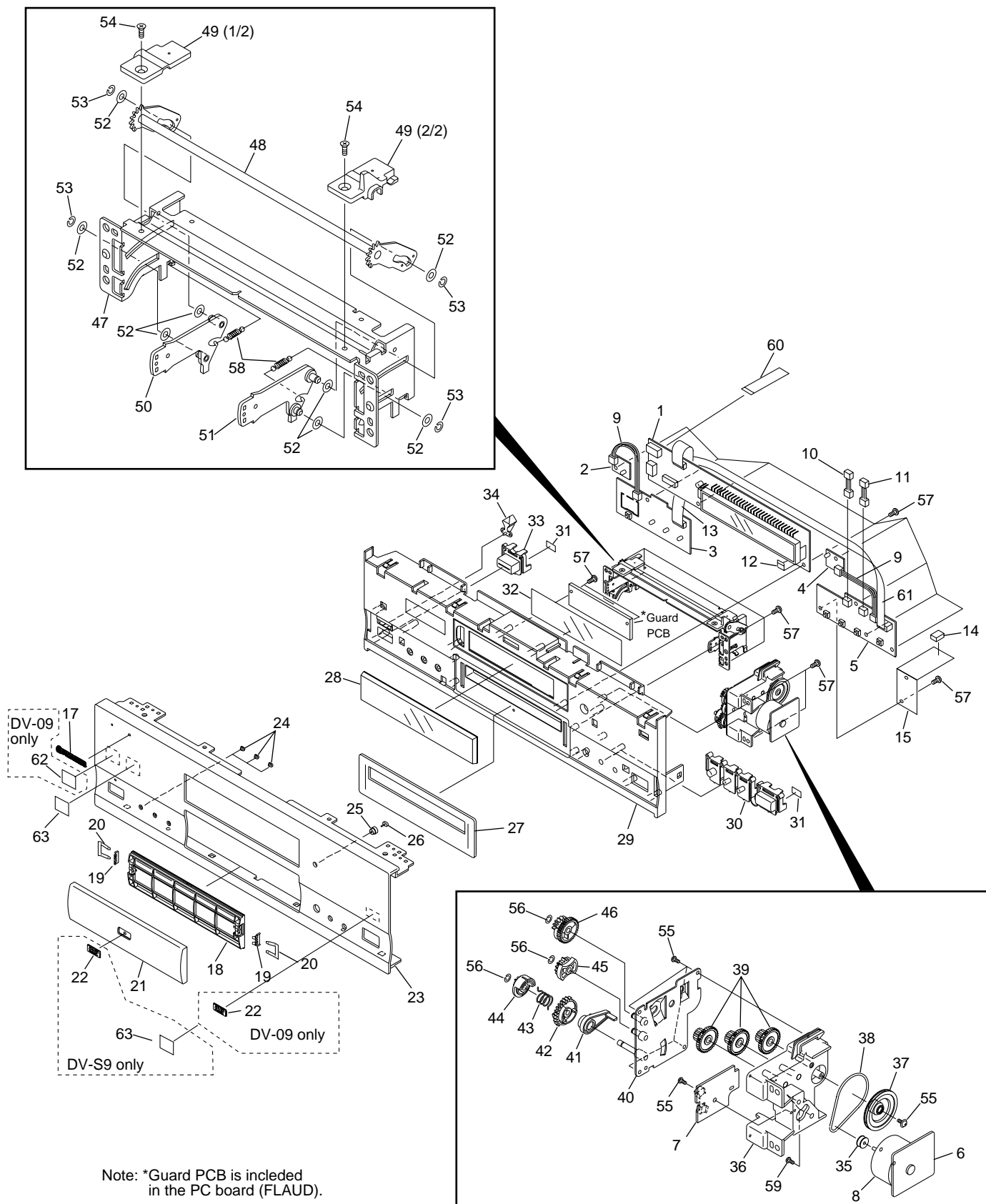
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
NSP	1	TRSA Assy	See Contrast table (2)		16	Screw	ABZ30P080FCC
NSP	2	TRSB Assy	VWR1300		17	Screw	IBZ40P060FCC
NSP	3	LSFB Assy	VWR1293		18	Washer	WH40FUC
△	4	Fuse (FU2 : 1A)	REK1075		19	Screw	BBP30P080FMC
	5	UL Tube	VEC1651		20	Screw	BBT30P080FCC
△	6	AC Inlet Assy (3P)	See Contrast table (2)		21	Insulator Assy	VXA2368
△	7	Power Transformer (Audio)	See Contrast table (2)		22	Screw	ABA1082
△	8	Power Transformer (Main)	See Contrast table (2)		23	Screw	ABA1193
△	9	Fuse (FU1 : 500mA)	VEK1009		24	UL Caution Card	See Contrast table (2)
△	10	Housing Assy (10P) (TRSB CN22-SYPS CN31)	See Contrast table (2)		25	AC Cord Spacer	See Contrast table (2)
	11	Rear Panel	See Contrast table (2)	△	26	AC Power Cord	See Contrast table (2)
NSP	12	Under Base	VNA1942	NSP	27	Caution Label	See Contrast table (2)
NSP	13	Bottom Plate	PNA2376	NSP	28	Washer	WH30FUC
NSP	14	Bottom Plate A	VNA1943				
	15	Clamper Cushion	VEC1271				

**(2) CONTRAST TABLE**

DV-09/KU/CA and DV-S9/L/TA are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			DV-09 /KU/CA	DV-S9 /L/TA	
NSP	1	TRSA Assy	VWR1298	VWR1297	(TRSB CN22-SYPS CN31)
△	6	AC Inlet Assy (3P)	Not used	VKP2174	
△	7	Power Transformer (Audio)(AC120V)	VTT1152	Not used	
△	7	Power Transformer (Audio)(AC110V)	Not used	VTT1155	
△	8	Power Transformer (Main)(AC120V)	VTT1151	Not used	
△	8	Power Transformer (Main)(AC110V)	Not used	VTT1154	
△	10	Housing Assy (10P)	VKP2193	VKP2168	
	11	Rear Panel	VNA1940	VNA1987	
	24	UL Caution Card	AAX-313	Not used	
	25	AC Cord Spacer	ANG1153	Not used	
△	26	AC Power Cord	VDG1046	Not used	
NSP	27	Caution Label	Not used	VRW1737	

## 2.5 FRONT PANEL SECTION



**(1) FRONT PANEL SECTION PARTS LIST**

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	FLKB Assy	See Contrast table (2)		31	Tape	PNM1017
NSP	2	STBY Assy	VWG1922		32	FL Filter	See Contrast table (2)
NSP	3	PWSB Assy	VWG1916		33	PW Button	See Contrast table (2)
NSP	4	LEDB Assy	VWG1919		34	LED Lens	VNK4285
NSP	5	PLSB Assy	VWG1913		35	Motor Pulley	PNW1634
NSP	6	DRMB Assy	VWG1932		36	Motor Holder	VNL1796
NSP	7	DRSB Assy	VWG1930		37	Gear Pulley	VNL1733
	8	DC Motor/0.75W(Door)	PXM1010		38	Belt (Rubber)	PEB1288
	9	Connector Assy	PG03KK-E07		39	Gear (C)	VNL1047
	10	Connector Assy	PG03KK4E07		40	Gear Base Assy	VXA2365
	11	Connector Assy	PG03KK2E07		41	Switch Arm	VNL1797
	12	Flexible Cable (14P) (FLKB CN403-DVD MAIN CN503)	VDA1661		42	Drive Gear C	VNL1794
	13	Flexible Cable (8P) (FLKB CN404-PWSB CN501)	VDA1668		43	Door Spring A	VBH1299
NSP	14	Spacer	VEC-244		44	Drive Gear D	VNL1795
	15	VO Sheet FP	VEC1992		45	Drive Gear B	VNL1793
	16	•••••			46	Drive Gear A	VNL1792
	17	Name Plate	See Contrast table (2)		47	Door Support	VNE2140
	18	Door Base	See Contrast table (2)		48	Drive Arm Assy	VXA2364
	19	Earth Plate	VBK1074		49	Drive Shaft Holder	VNL1791
	20	Clip	VBM1003		50	Door Arm L Assy	VXA2362
	21	Door Aluminum	See Contrast table (2)		51	Door Arm R Assy	VXA2363
	22	DVD Plate	See Contrast table (2)		52	Washer	WA32D080D025
	23	Front Aluminum	See Contrast table (2)		53	Washer	WT26D047D050
	24	Lens	PNW1257		54	Screw	CBZ26P060FMC
	25	DVD Ring	VAK1006		55	Screw	Z39-019
	26	DISP Lens	PNW2113		56	Washer	WT31D054D050
	27	Shield Cushion	See Contrast table (2)		57	Screw	BPZ30P080FCC
	28	FL Lens	See Contrast table (2)		58	Door Spring B	VBH1300
	29	Panel Base	See Contrast table (2)		59	Screw	BMZ26P040FMC
	30	Main Key	See Contrast table (2)		60	Flexible Cable (10P) (FLKB CN405-SYPS CN34)	VDA1660
					61	Flexible Cable (8P) (FLKB CN402-PLSB CN523)	VDA1667
				NSP	62	THX Badge	See Contrast table (2)
					63	DTS Label	VRW1732

**(2) CONTRAST TABLE**

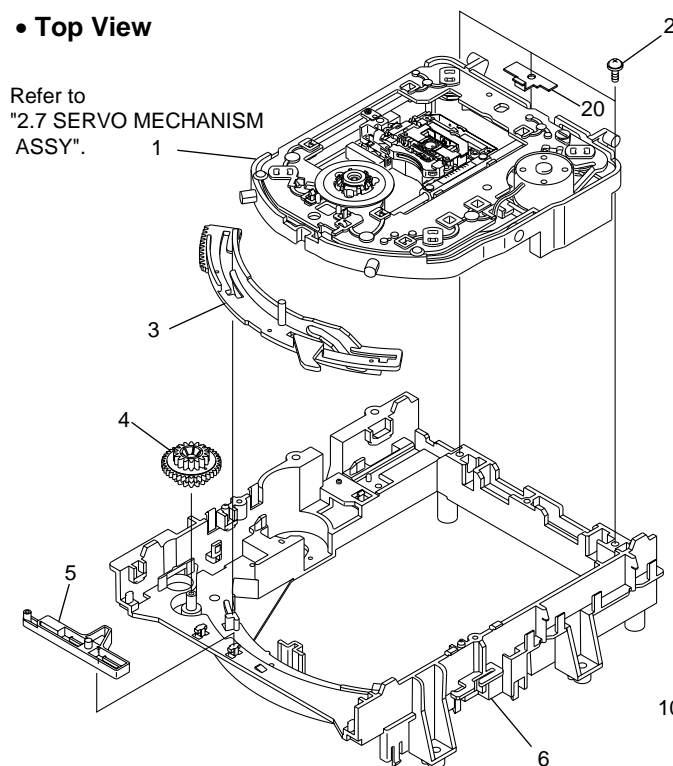
DV-09/KU/CA and DV-S9/L/TA are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			DV-09 /KU/CA	DV-S9 /L/TA	
	1	FLKB Assy	VWG1910	VWG1911	
	17	Name Plate	AAM7004	VAM1051	
	18	Door Base	VNK4240	VNK4239	
	21	Door Aluminum	VAH1285	VAH1284	
	22	DVD Plate	VAM1076	VAM1077	
	23	Front Aluminum	VAH1283	VAH1282	
	27	Shield Cushion	VEC1970	VEC1969	
	28	FL Lens	VEC1968	VEC1967	
	29	Panel Base	VNK4236	VNK4235	
	30	Main Key	VNK4238	VNK4237	
	32	FL Filter	VEC1966	VEC1965	
	33	PW Button	VNK4101	VNK4059	
	62	THX Badge	AAM7003	Not used	

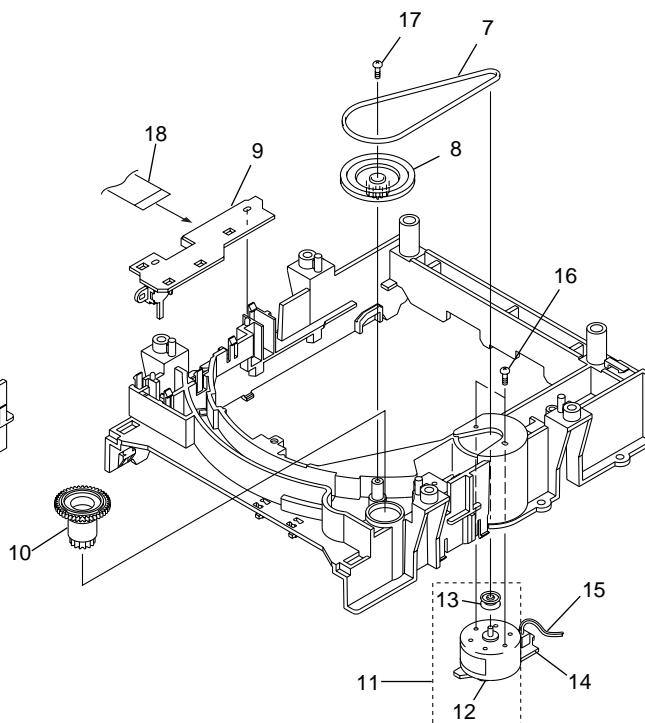


## 2.6 LOADING MECHANISM ASSY

- **Top View**



- **Bottom View**



## ● LOADING MECHANISM ASSY PARTS LIST

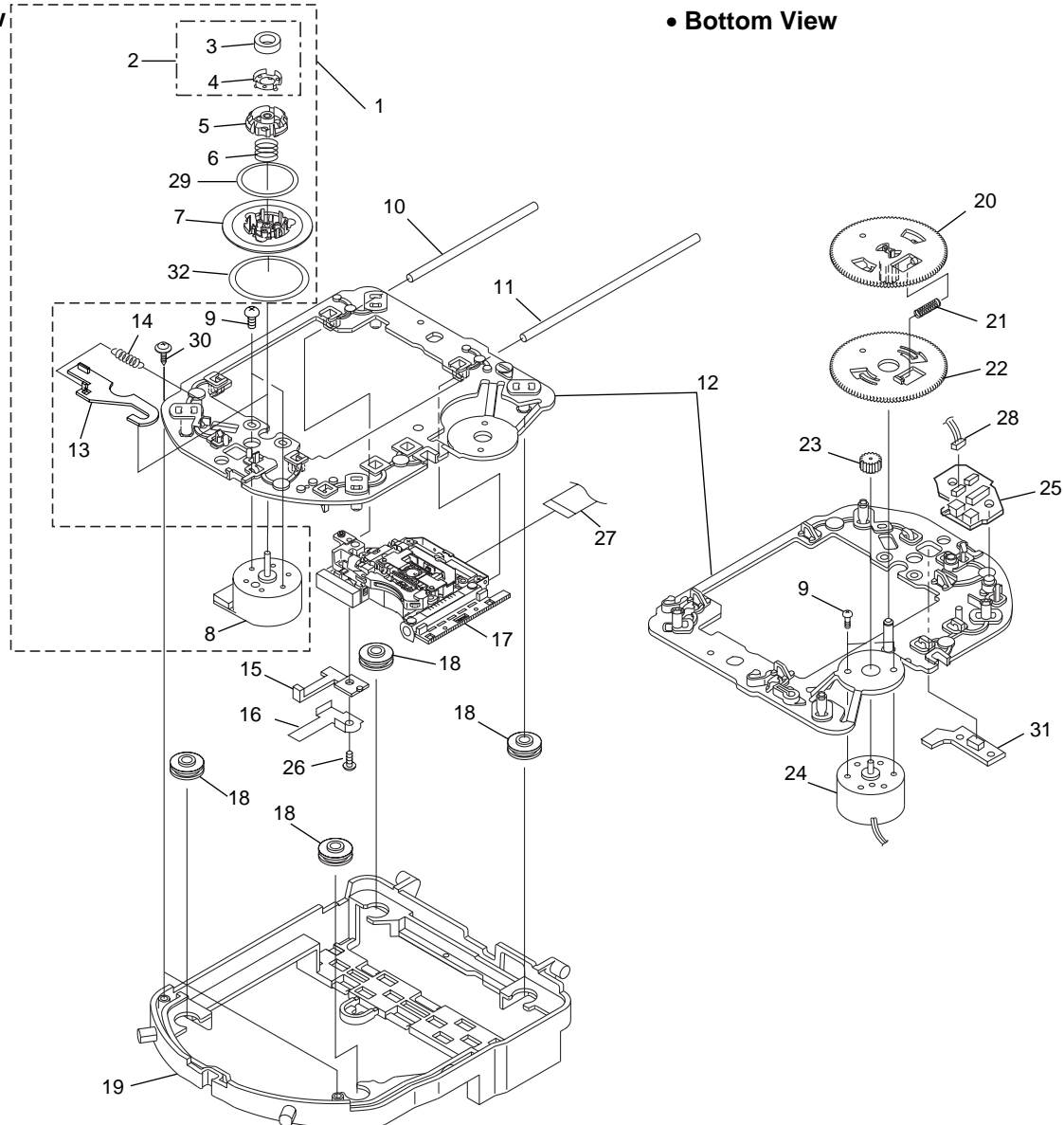
Mark	No.	Description	Part No.
NSP	1	Servo Mechanism Assy-S	VXX2538
	2	Screw	DBA1006
	3	Drive Cam	VNL1736
	4	Drive Gear	VNL1735
	5	Lock Plate	VNL1737
	6	Loading Base	VNK4245
	7	Rubber Belt	VEB1260
	8	Gear Pulley	VNL1733
	9	LOSB Assy	VWG1885
	10	Loading Gear	VNL1734

Mark	No.	Description	Part No.
NSP	11	Loading Motor Assy	VXX2505
	12	DC Motor	PXM1027
	13	Motor Pulley	PNW1634
	14	LOMB Assy	VWG1886
	15	Connector Assy (2P) (LOMB CN401 – LOSB CN303)	PG02KK-E35
	16	Screw	VBA1055
	17	Screw	Z39-019
	18	Flexible Cable (8P) (LOSB CN302 – INSB CN202)	VDA1649
	19	•••••	
	20	Stopper	DNH2076

## 2.7 SERVO MECHANISM ASSY

### • Top View

### • Bottom View

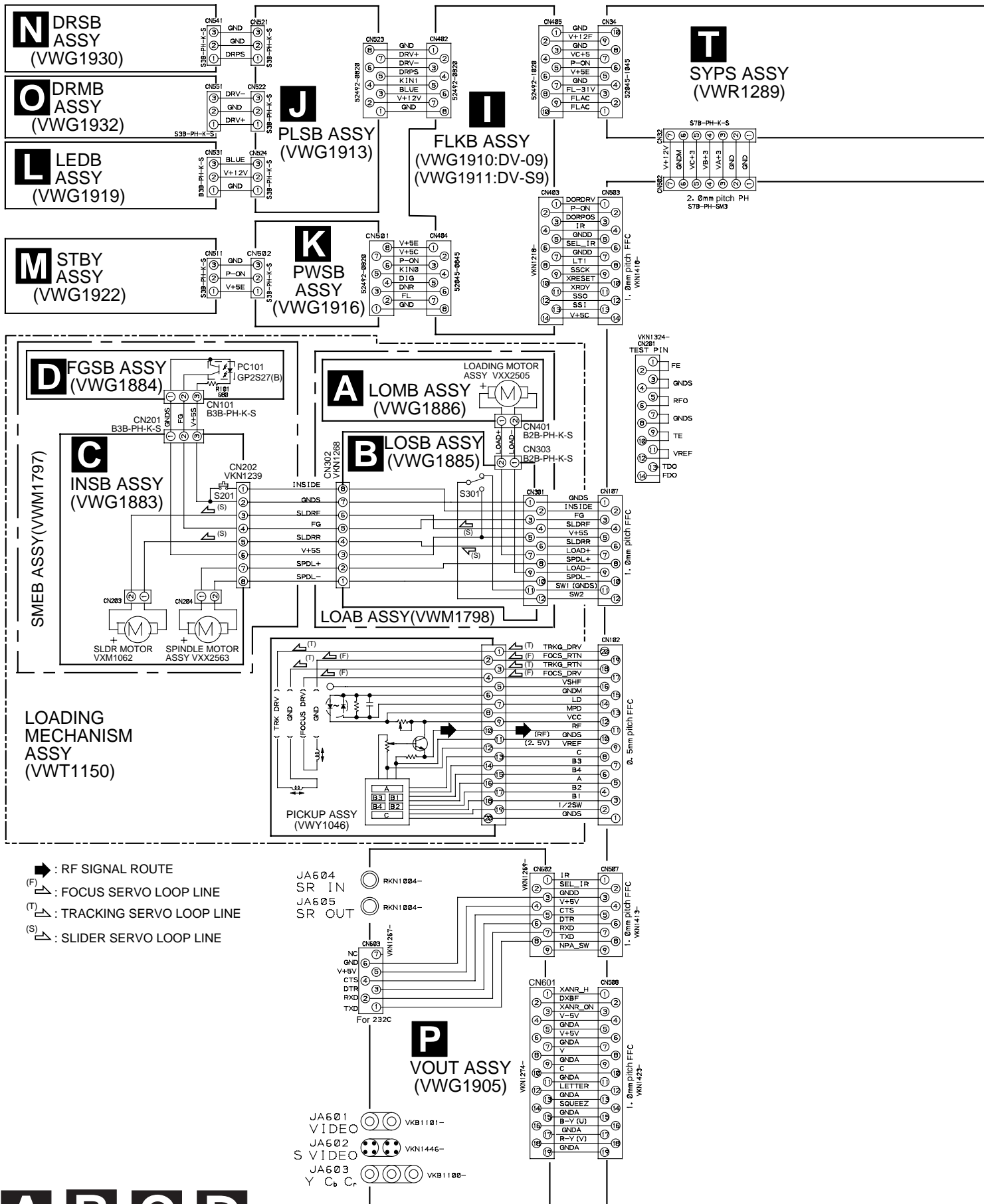


### • SERVO MECHANISM ASSY PARTS LIST

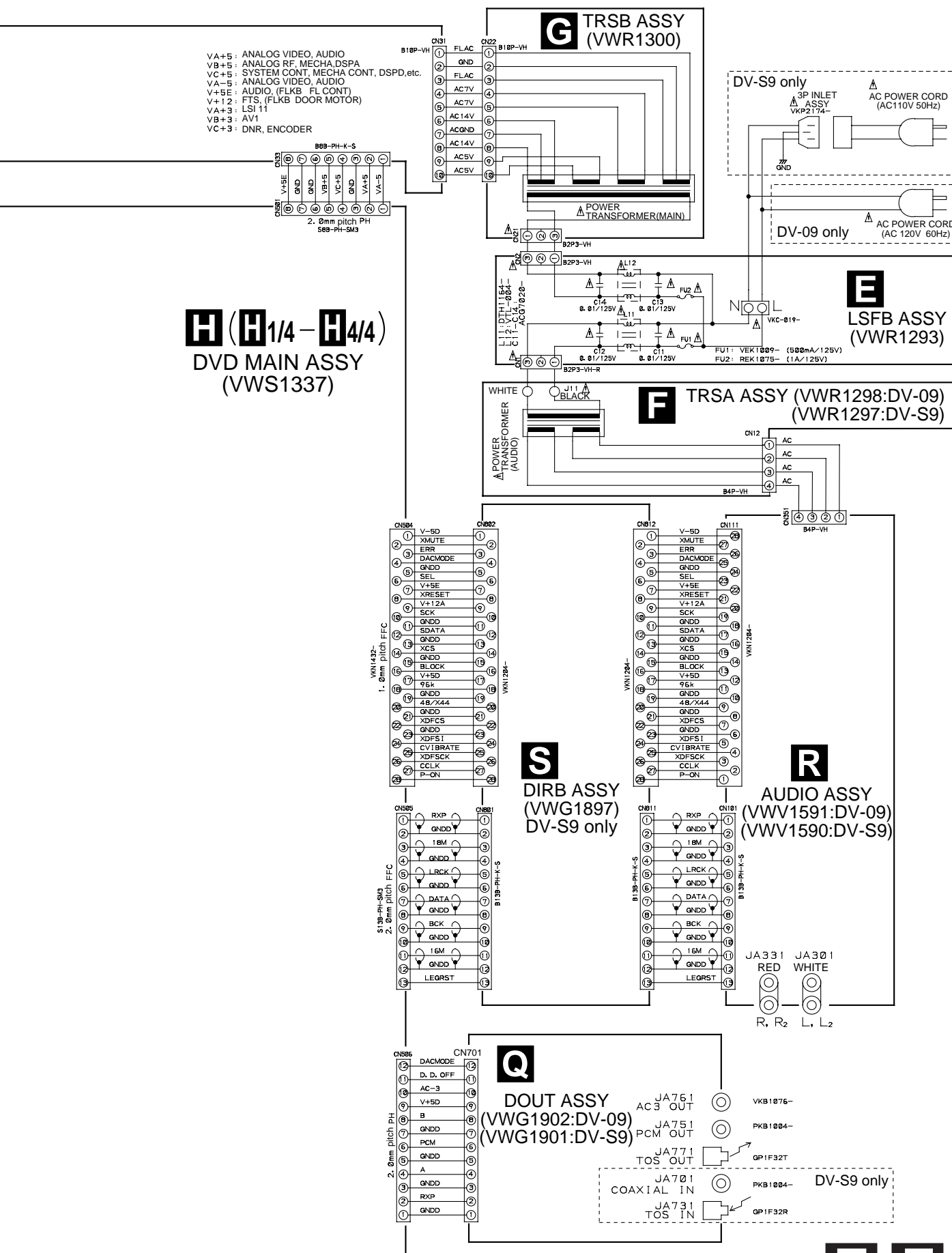
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Spindle Motor Assy	VXX2563		18	Floating Rubber	DEB1315
	2	Magnet Holder Assy	VXX2507		19	Float Base	VNL1732
NSP	3	Magnet	VYM1024		20	Gear D	VNL1766
NSP	4	Magnet Holder	VNE2070		21	Gear Spring	VBH1279
	5	Centering Ring	VNL1746		22	Gear E	VNL1767
	6	Centering Spring	VBH1278		23	Gear F	VNL1768
NSP	7	Disc Table	VNL1747		24	Motor	VXM1062
NSP	8	Motor	VXM1071	NSP	25	INSB Assy	VWG1883
	9	Screw	JGZ17P028FMC		26	Screw	PBZ20P050FMC
	10	Sub Guide Bar	VLL1489		27	Flexible Cable (20P) (DVD MAIN CN102 – Pickup Assy)	VDA1680
	11	Guide Bar	VLL1488		28	Connector Assy (3P) (INSB CN201 – FGSB CN101)	VKP2150
	12	Mechanism Base	VNL1748	NSP	29	Table Sheet	DEC2040
	13	Hook	VNL1770		30	Screw	PBA1048
	14	Hook Spring	VBH1291				
	15	Slider	VNL1745				
	16	Hold Spring	VNC1011	NSP	31	FGSB Assy	VWG1884
NSP	17	Pickup Assy	VWY1046	NSP	32	Sheet	VEC1959

# 3. SCHEMATIC DIAGRAM

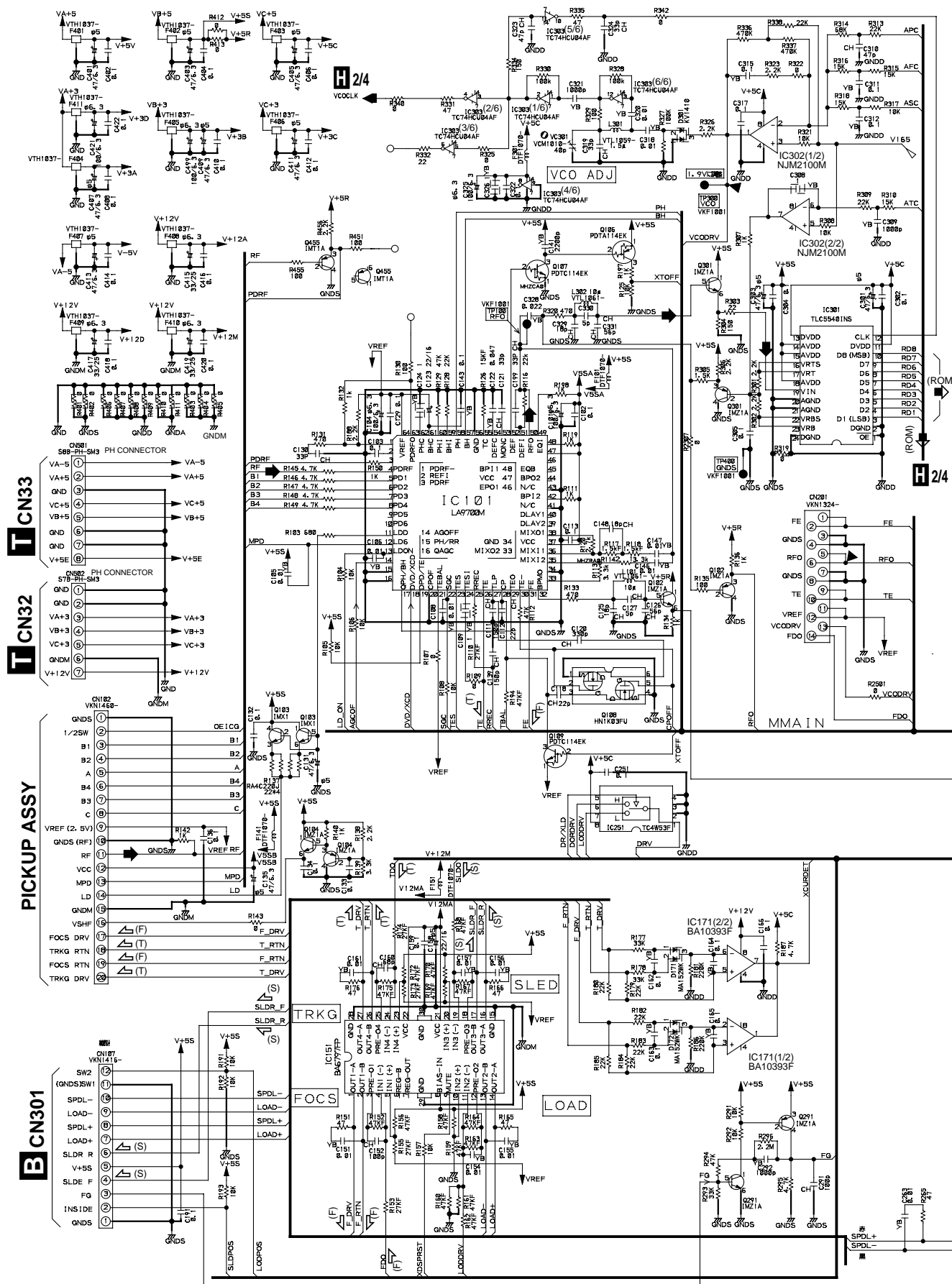
## 3.1 OVERALL CONNECTION DIAGRAM, LOMB, LOSB, INSB, FGSB, LSFB, TRSA and TRSB ASSEMBLIES



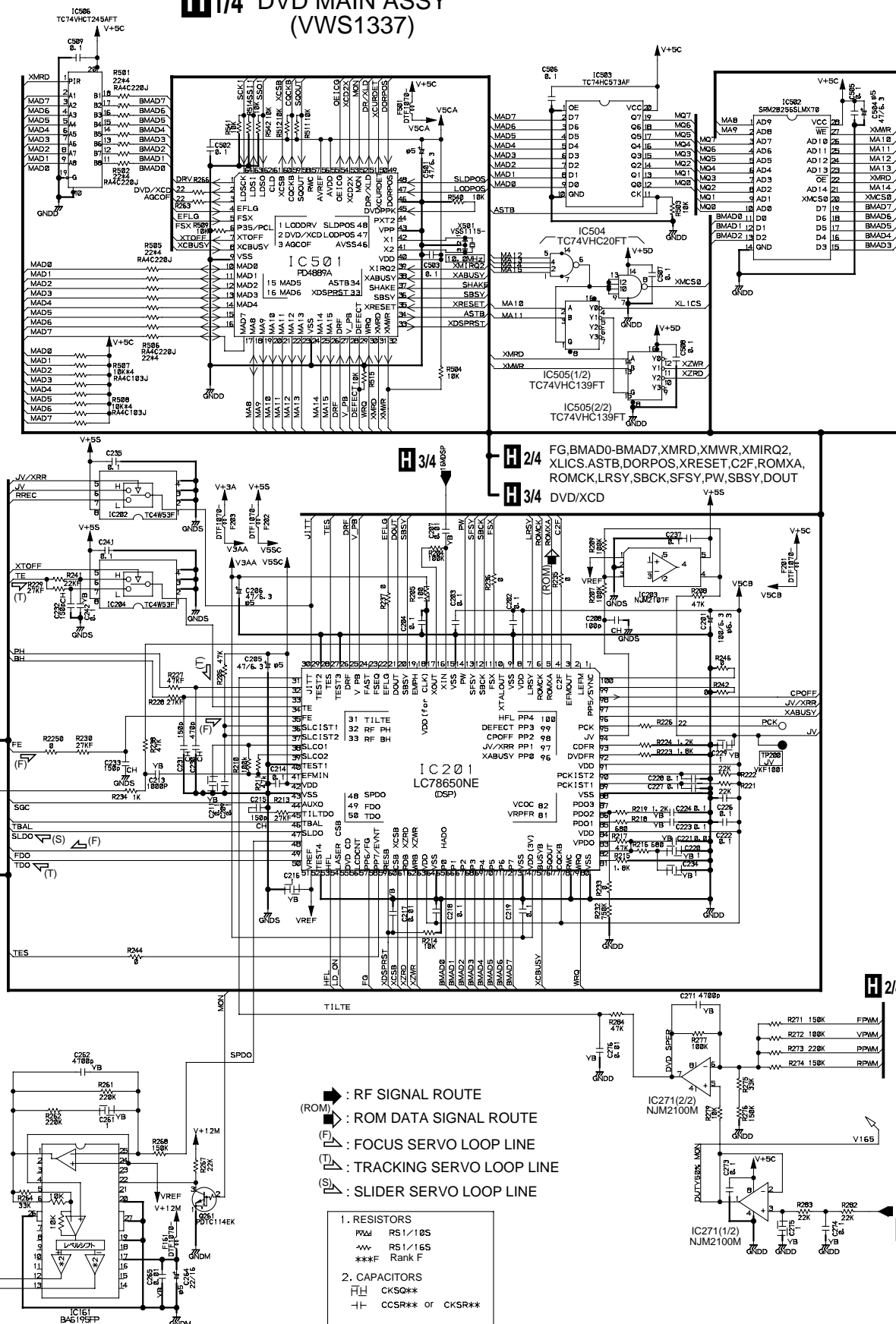
Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST"



### 3.2 DVD MAIN ASSY(1/4)



# H1/4 DVD MAIN ASSY (VWS1337)





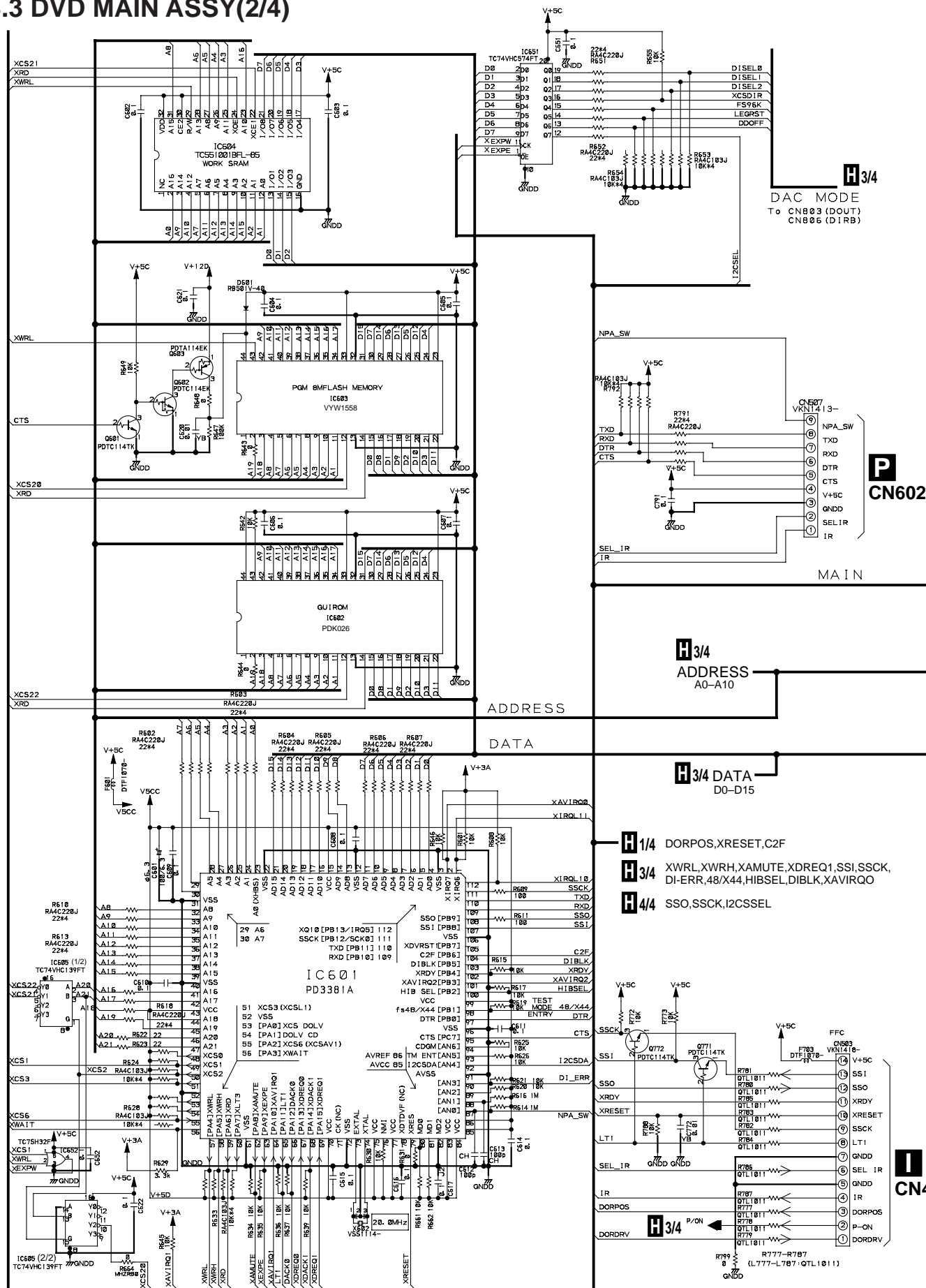
### 3.3 DVD MAIN ASSY(2/4)

A

B

C

D





# H 2/4 DVD MAIN ASSY (VWS1337)

## 1. RESISTORS

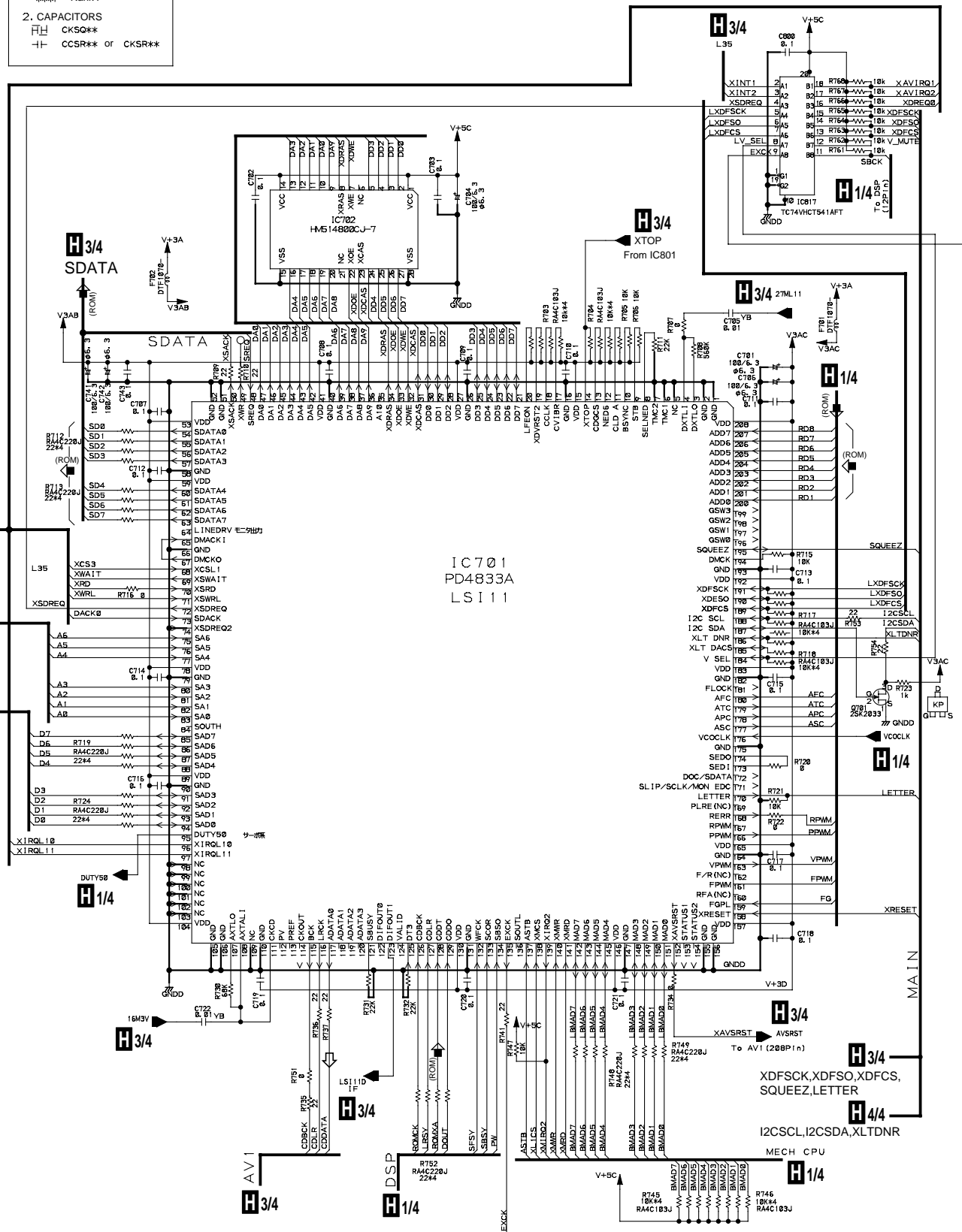
□ RS1/105  
 □ RS1/165  
 \*\*\*F Rank F

## 2. CAPACITORS

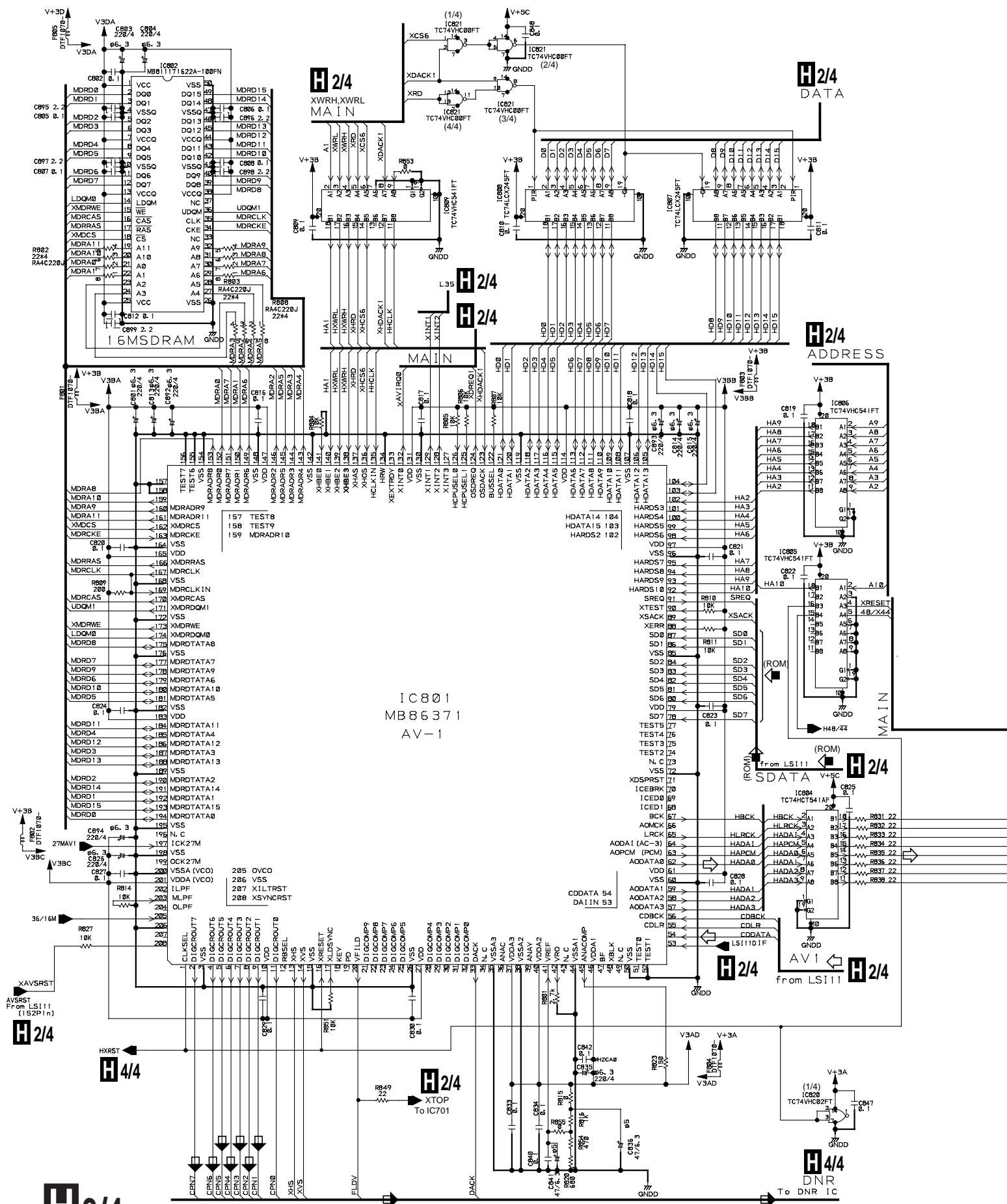
□ CK50\*\*  
 □ CCSR\*\* or CKSR\*\*

⇨ : AUDIO SIGNAL ROUTE

(ROM) ⇨ : ROM DATA SIGNAL ROUTE

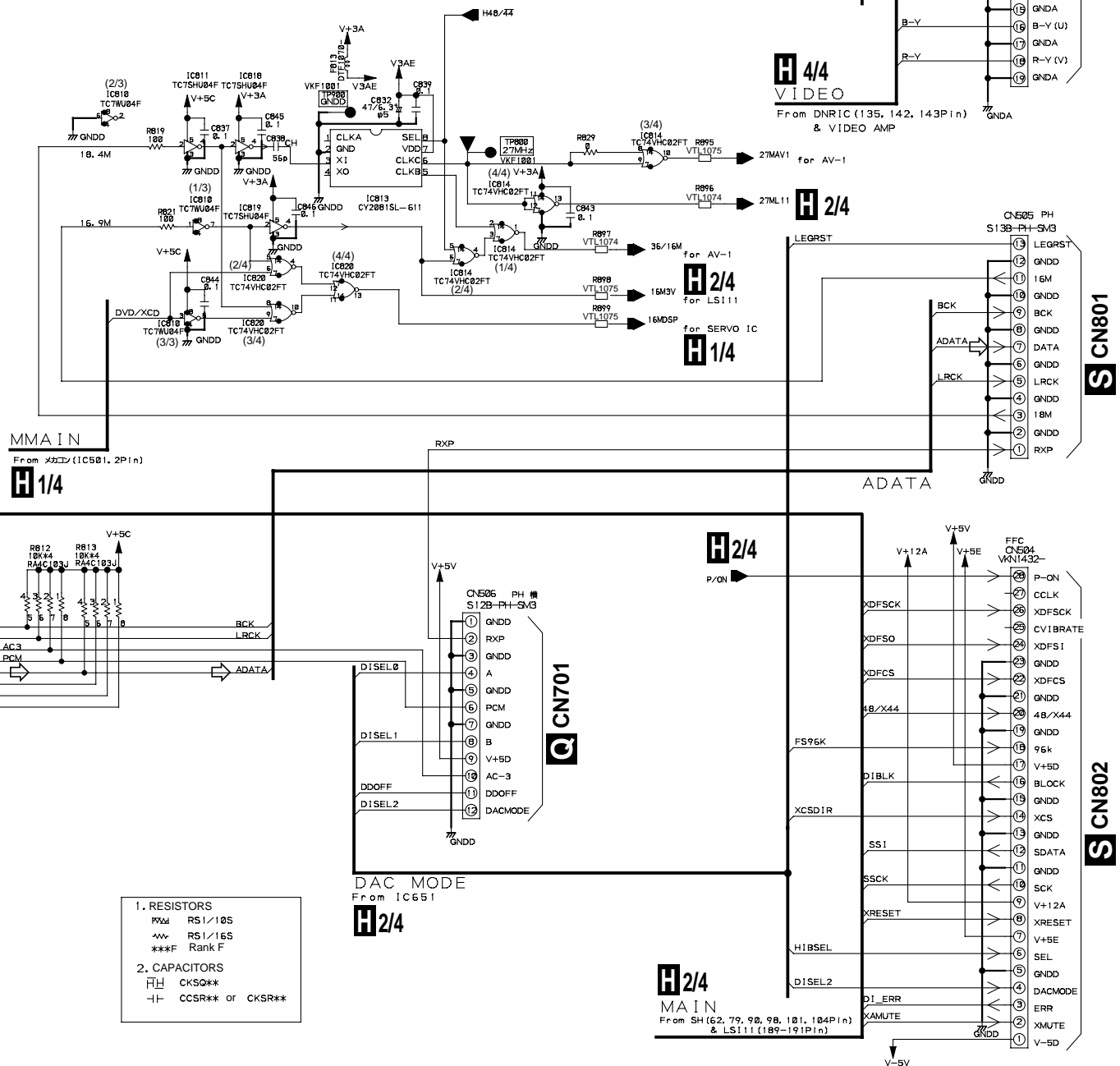


### 3.4 DVD MAIN ASSY(3/4)



# **H 3/4** DVD MAIN ASSY (VWS1337)

- : AUDIO SIGNAL ROUTE  
 (ROM) ■ : ROM DATA SIGNAL ROUTE  
 □ : VIDEO SIGNAL ROUTE  
 (Y) □ : Y SIGNAL ROUTE  
 (C) □ : C SIGNAL ROUTE



### 3.5 DVD MAIN ASSY(4/4)

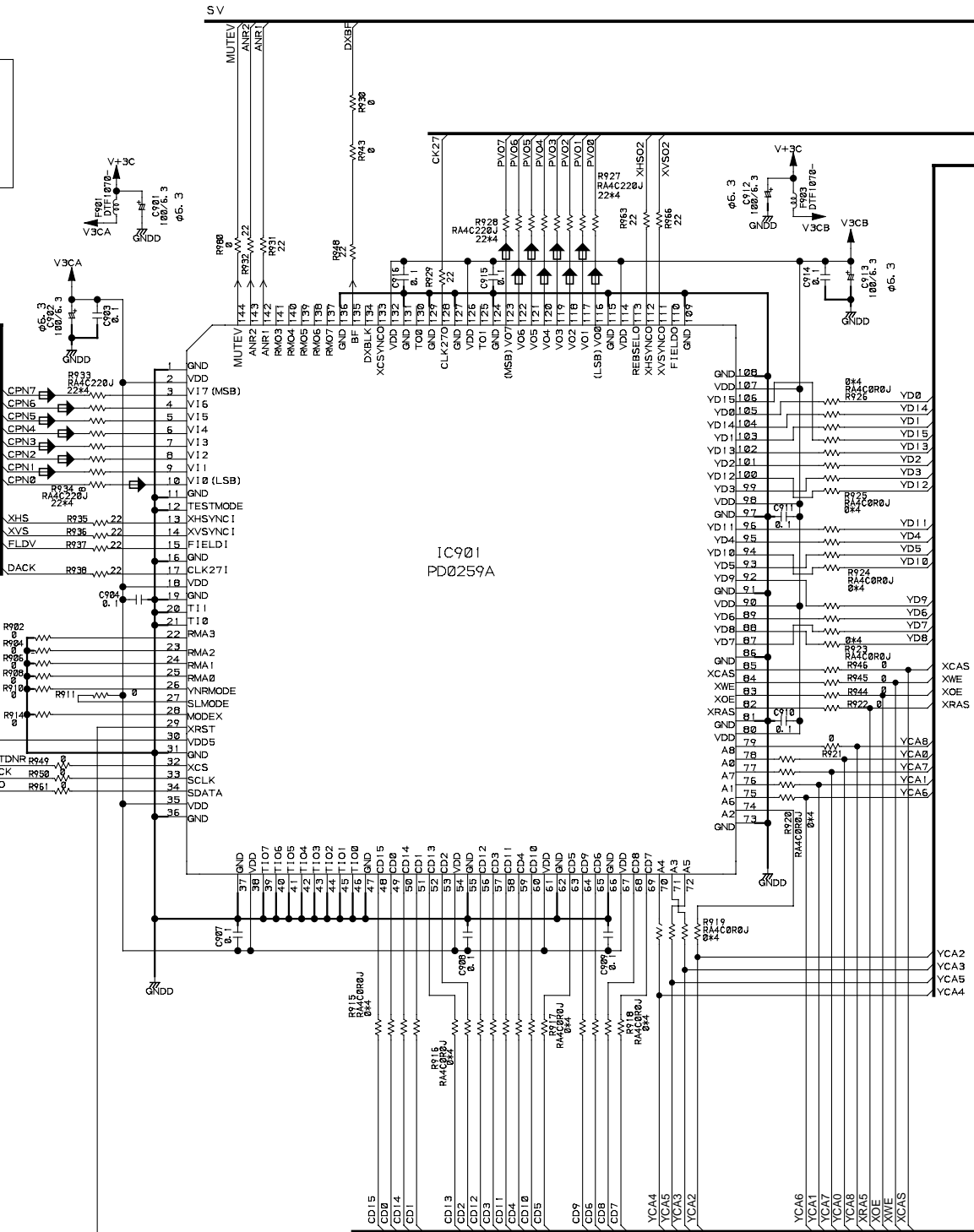
## H 4/4 DVD MAIN ASSY (VWS1337)

1. RESISTORS  
 R51/105  
 R51/165  
 Rank F
2. CAPACITORS  
 C50\*\*  
 C50\*\*


### H 3/4 DNR From AVI (1, 2, 4-9, 11, 13, 14, 17, 20, 33Pin)

### H 2/4 XLTDNR, SSCK, SSO, I2CSEL, I2CSDA, I2CSCL From SH (107, 108, 111Pin) & LSI (186-188Pin)

### H 3/4 HXRST



 : VIDEO SIGNAL ROUTE  
 : Y SIGNAL ROUTE  
 : C SIGNAL ROUTE

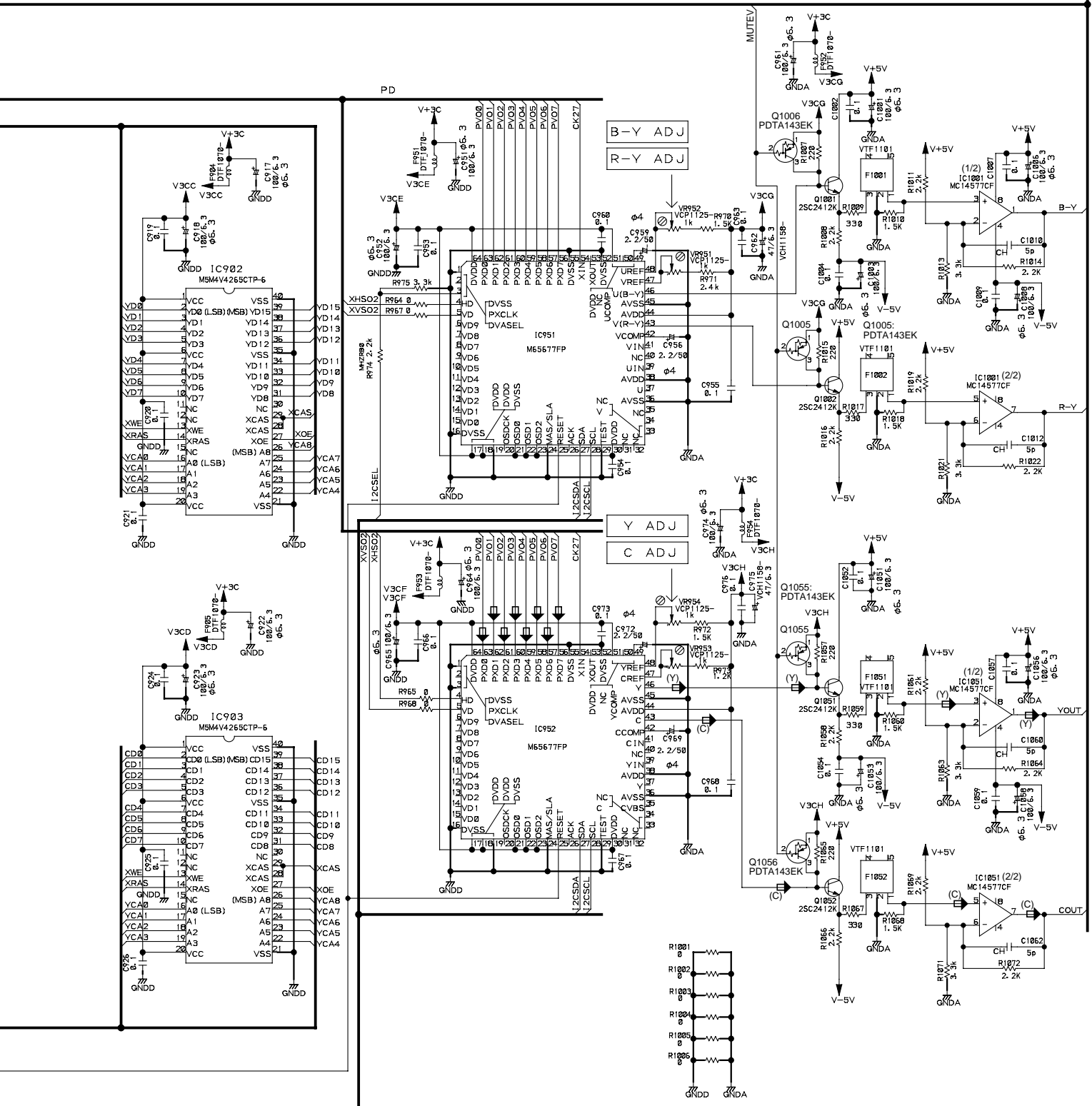
 3/4  
 VIDEO  
 To CN802 (VOUT)

A

B

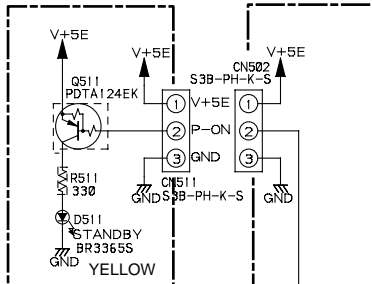
C

D

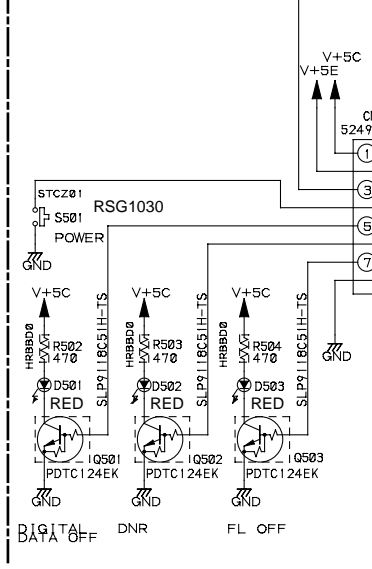


### 3.6 FLKB, PLSB, PWSB, LEDB, STBY, DRSB and DRMB ASSEMBLIES

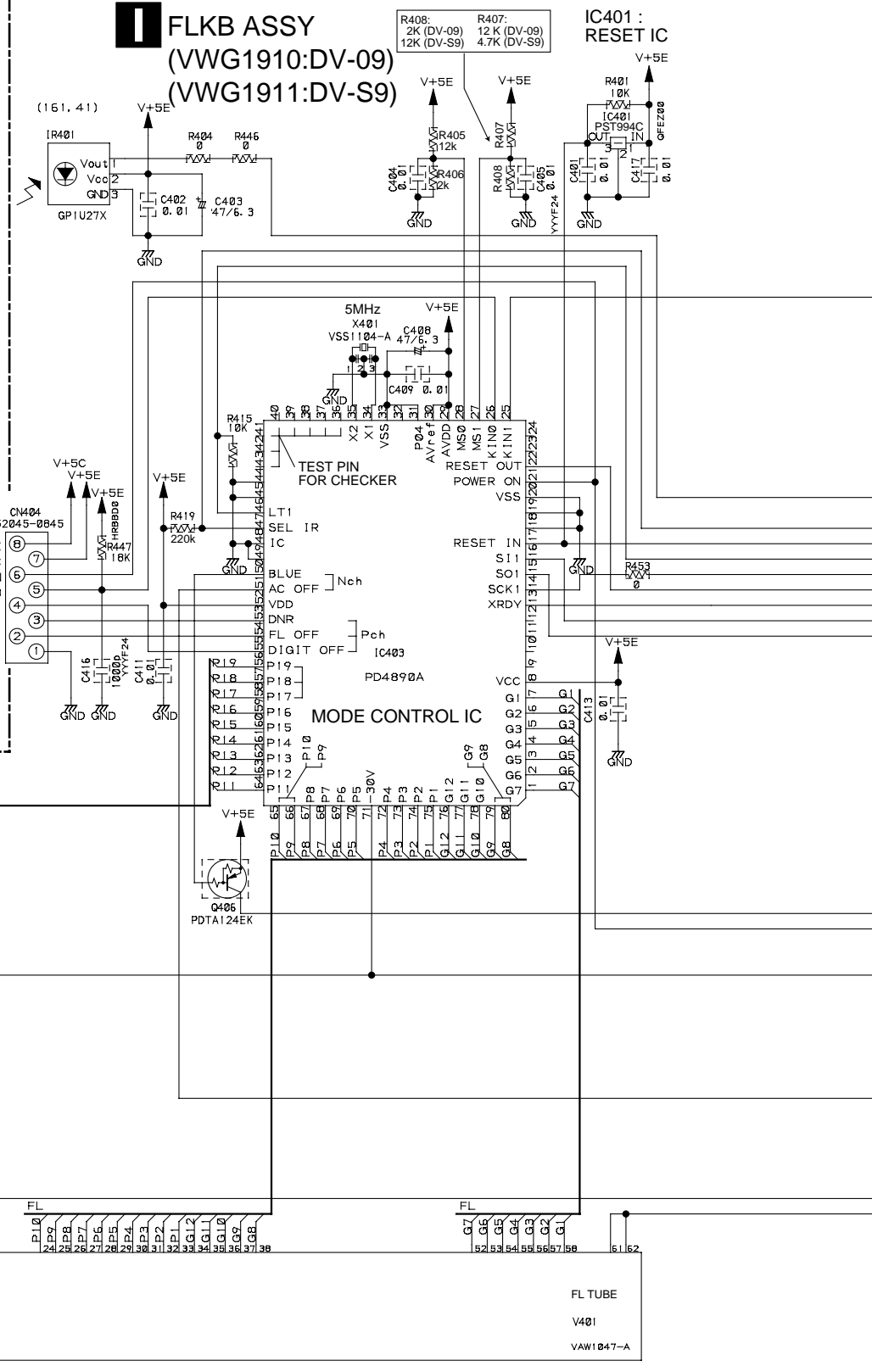
#### M STBY ASSY (VWG1922)



#### K PWSB ASSY (VWG1916)



#### I FLKB ASSY (VWG1910:DV-09) (VWG1911:DV-S9)

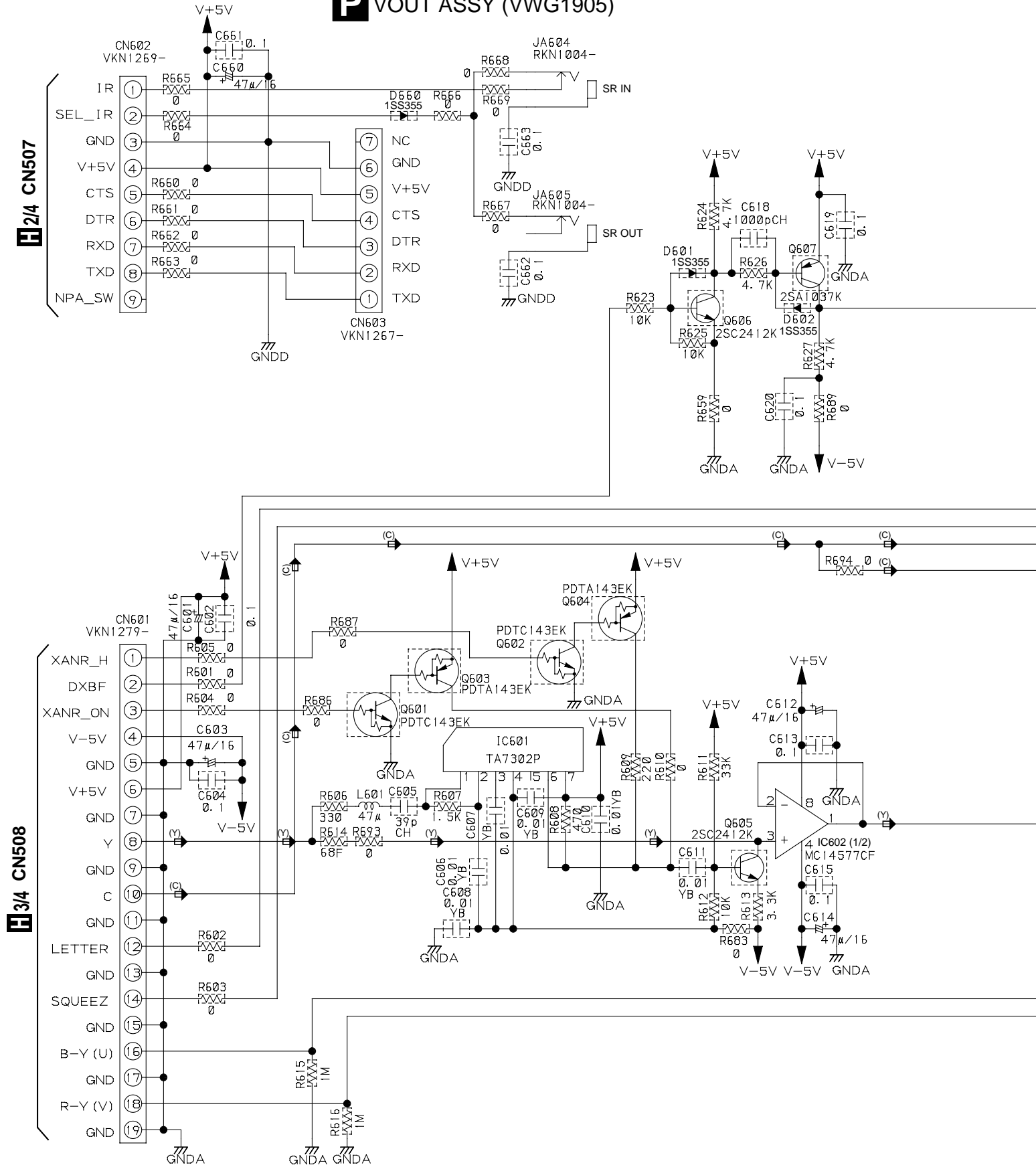






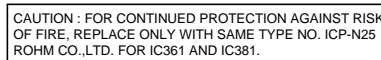
### 3.7 VOUT ASSY

#### P VOUT ASSY (VWG1905)





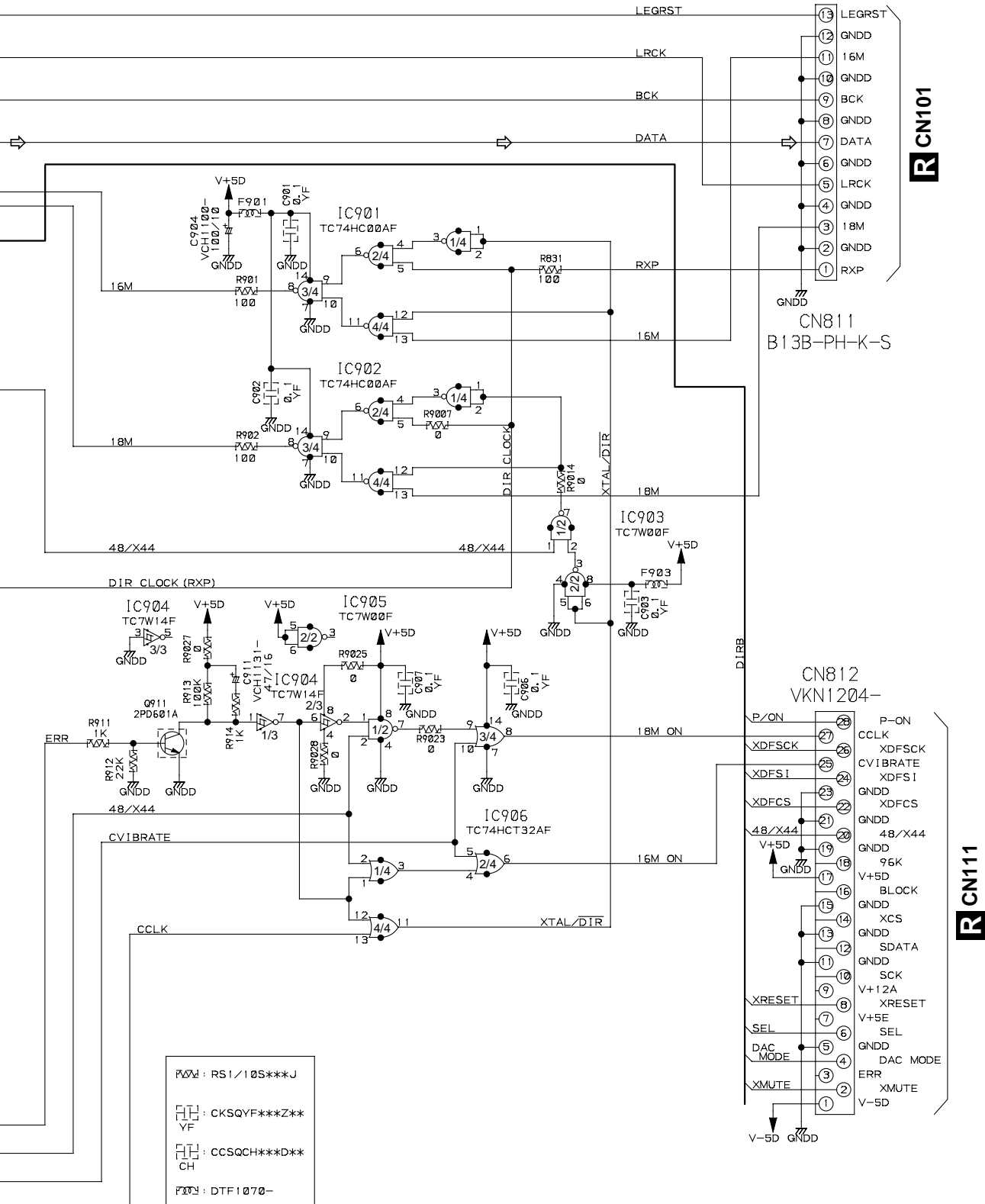




**Q R**



⇒ : AUDIO SIGNAL ROUTE



### 3.10 SYPS ASSY

● NOTE FOR FUSE REPLACEMENT

● **CAUTION :** FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE WITH SAME TYPE AND RATINGS ONLY.

**T**SYPS ASSY (VWR1289)

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. 491.750, MFD BY LITTELFUSE INC. FOR IC101.

**CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. 491.400, MFD BY LITTELFUSE INC. FOR IC102, IC201 AND IC203.**

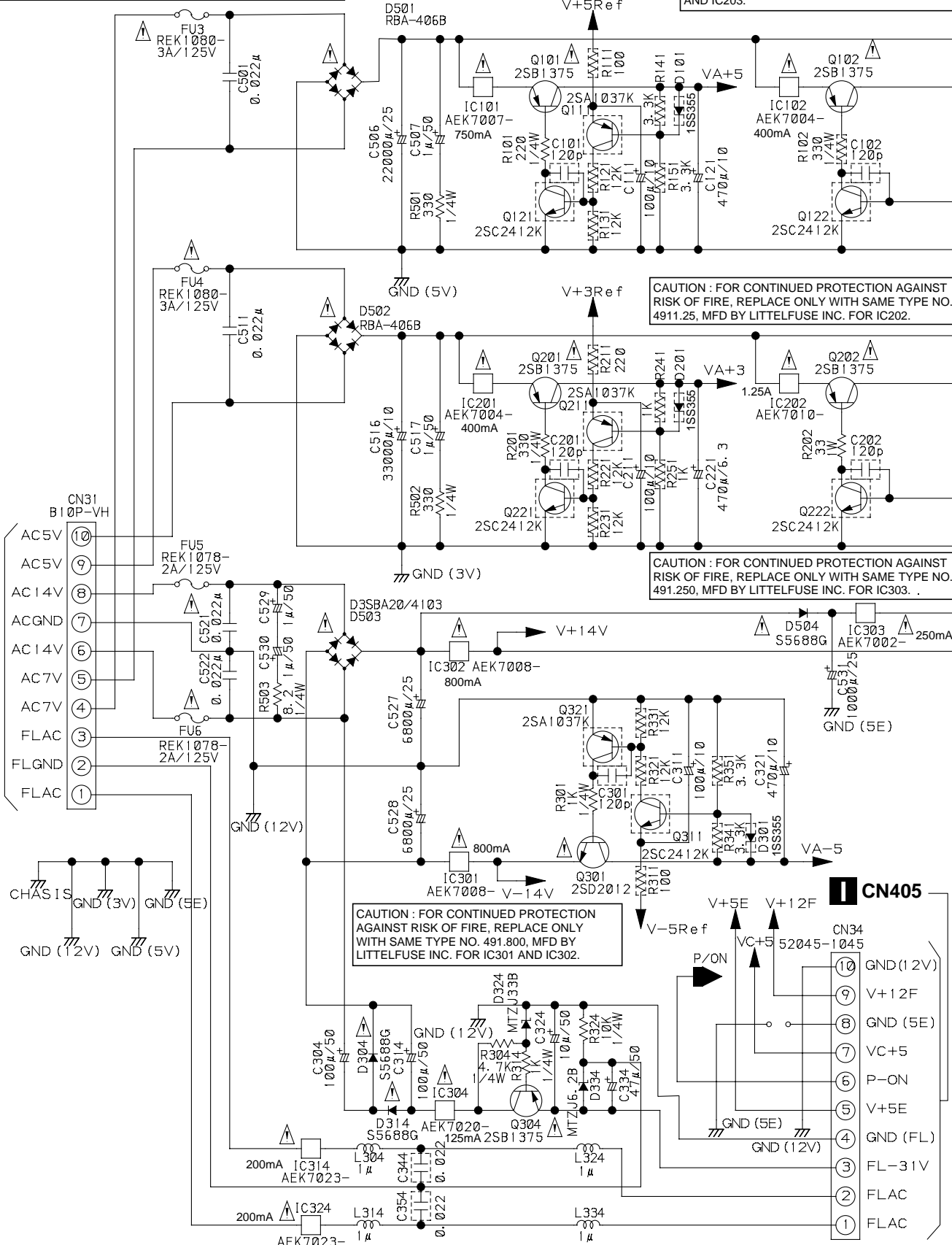
CAUTION : FOR CONTINUED PROTECTION AGAINST  
RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO.  
4911.25. MFD BY LITTELFUSE INC. FOR IC202.

CAUTION : FOR CONTINUED PROTECTION AGAINST  
RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO.  
491.250 MFD BY LITTELFUSE INC. FOR IC303. .

**CAUTION : FOR CONTINUED PROTECTION  
AGAINST RISK OF FIRE, REPLACE ONLY  
WITH SAME TYPE NO. 491.800, MFD BY  
LITTELFUSE INC. FOR IC301 AND IC302.**

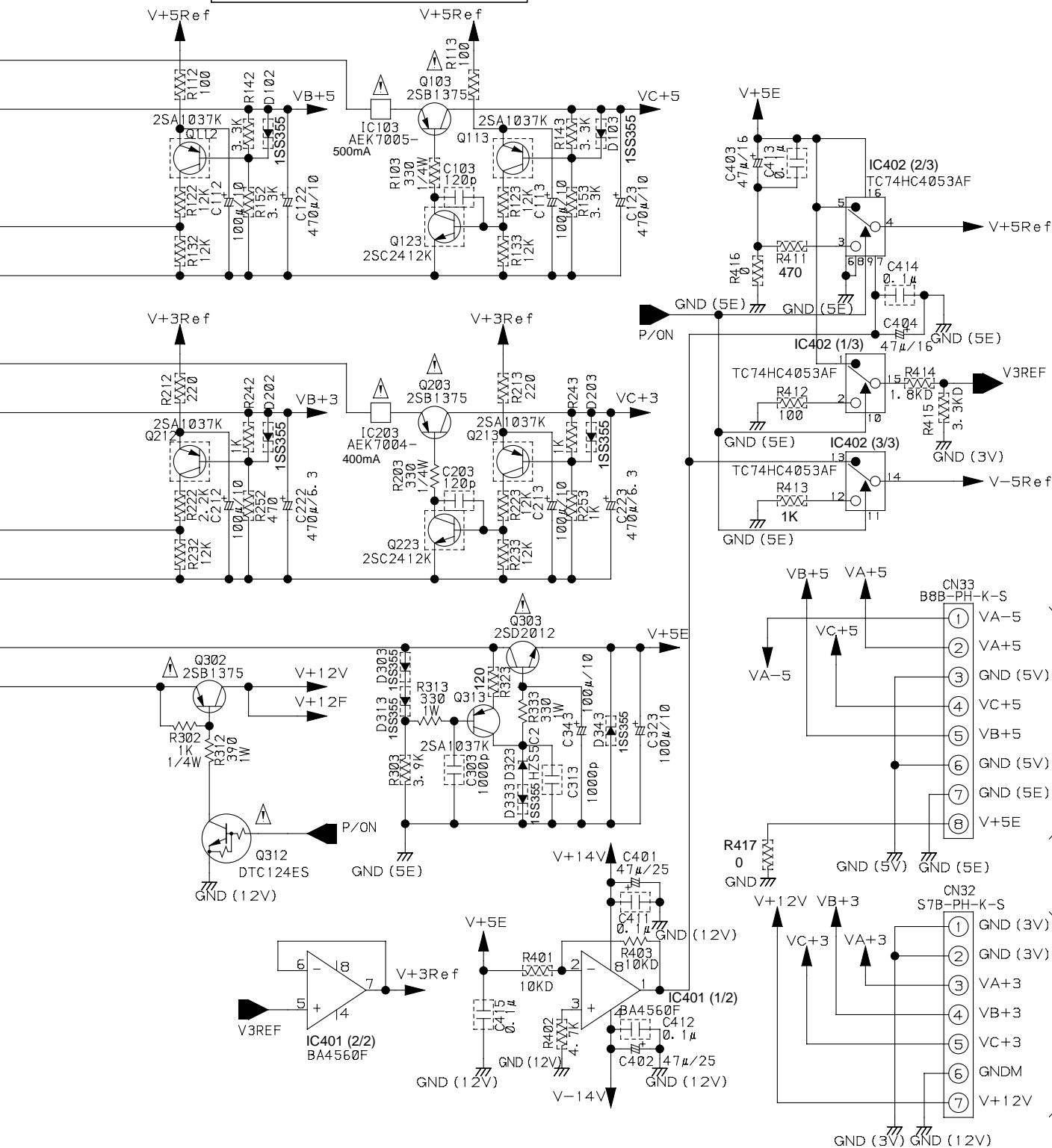
**CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE,  
REPLACE ONLY WITH SAME TYPE NO. 491.200, MFD BY LITTELFUSE  
INC. FOR IC314 AND IC324.**

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE,  
REPLACE ONLY WITH SAME TYPE NO. 491.125, MFD BY LITTELFUSE  
INC. FOR IC304.





CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE NO. 491.500, MFD BY LITTELFUSE INC. FOR IC103.



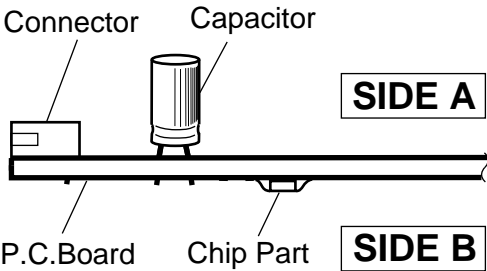
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

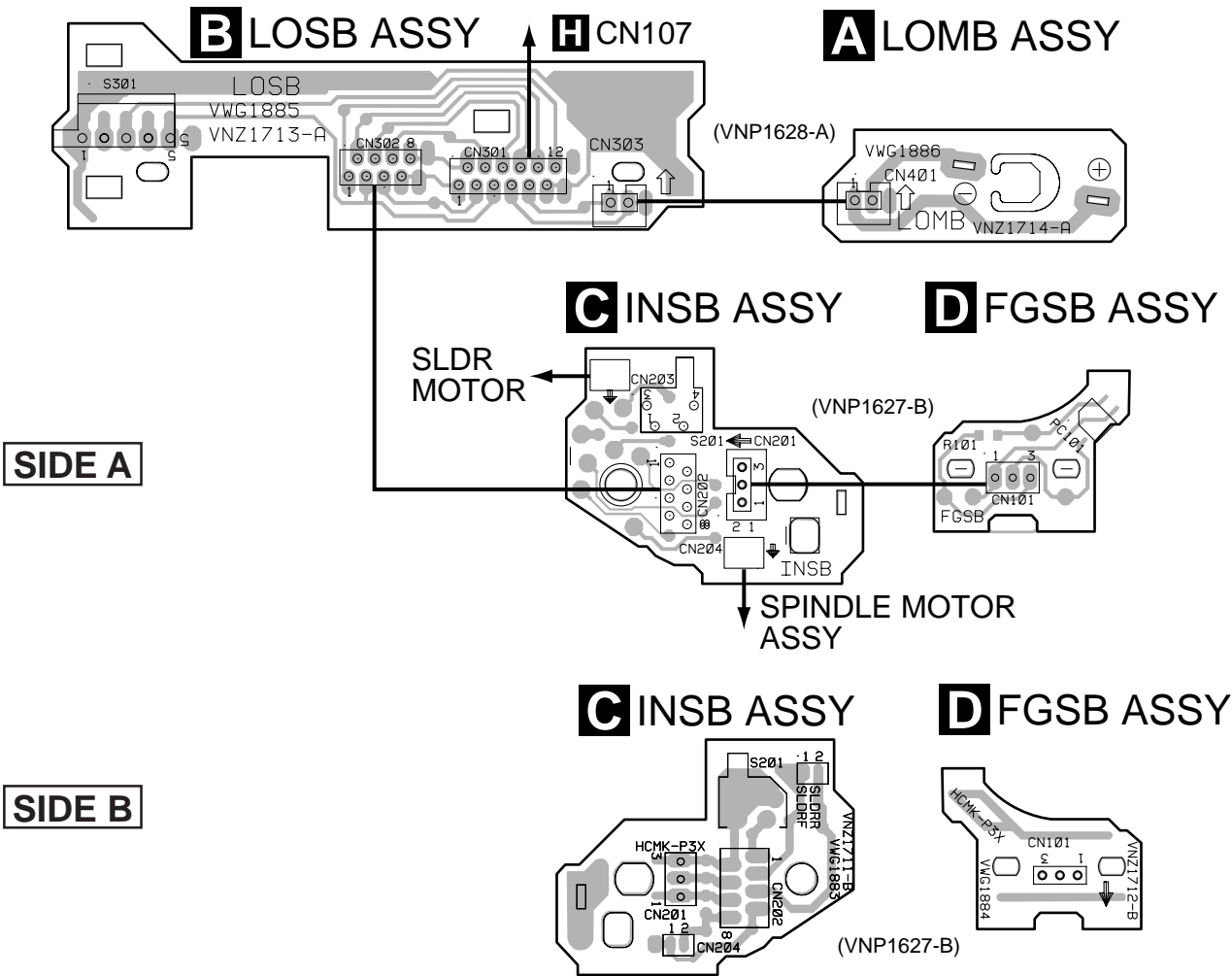
- 1. Part numbers in PCB diagrams match those in the schematic diagrams.
- 2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

- 3. The parts mounted on this PCB include all necessary parts for several destinations.
- For further information for respective destinations, be sure to check with the schematic diagram.
- 4. View point of PCB diagrams.



4.1 LOMB, LOSB, INSB and FGSB ASSEMBLIES





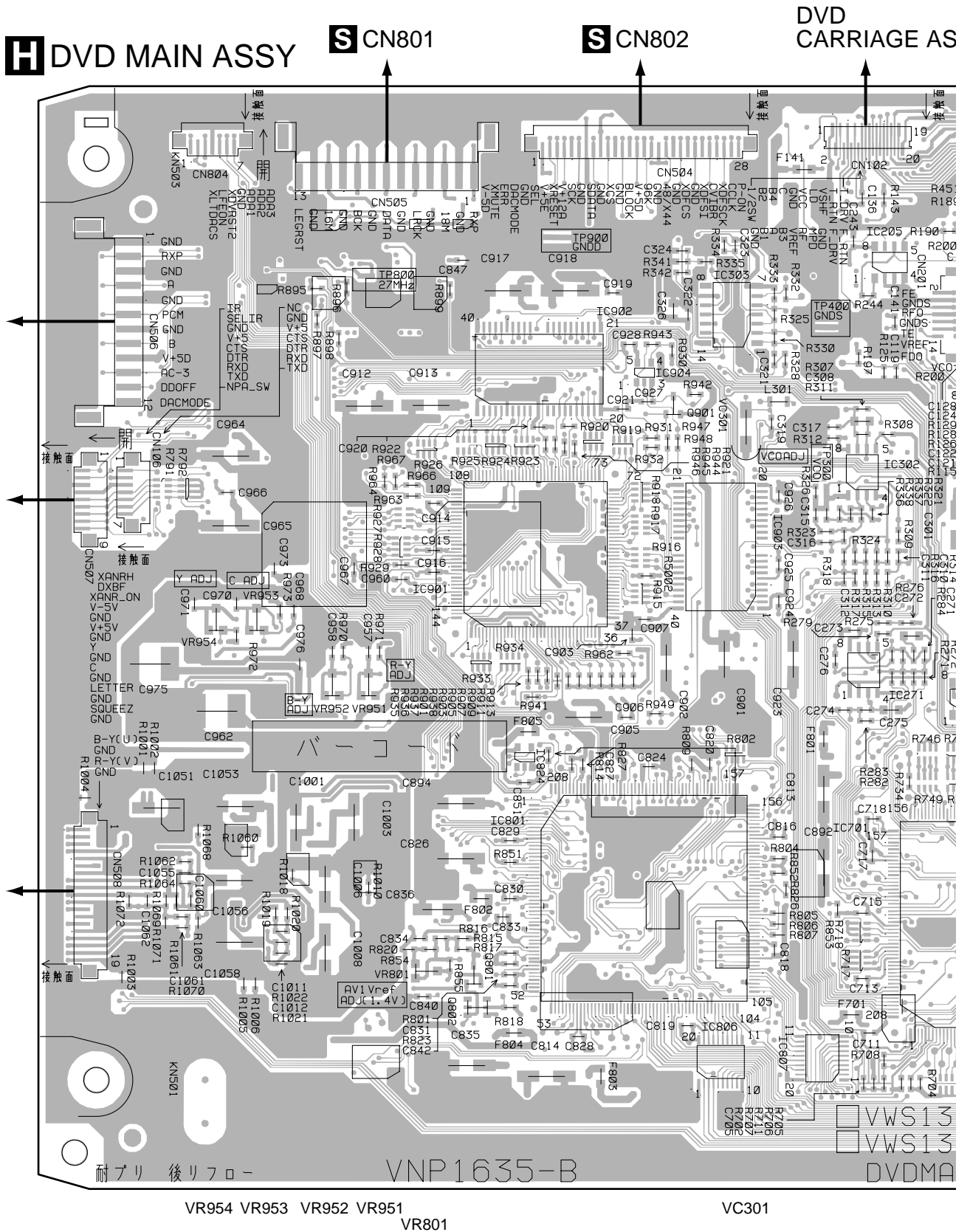
4.3 DVD MAIN ASSY

A

B

C

D

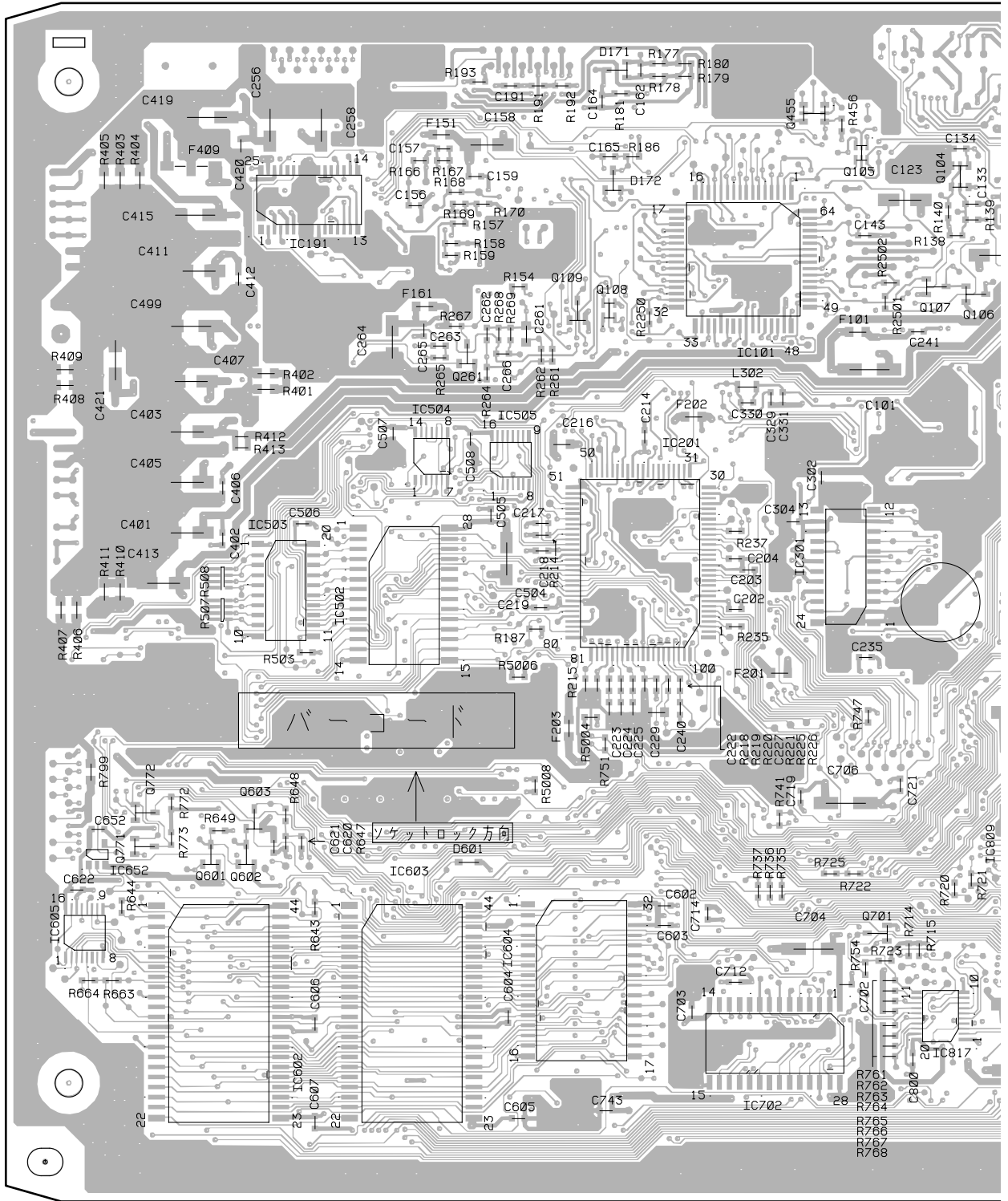


SIDE A

8



**H** DVD MAIN ASSY

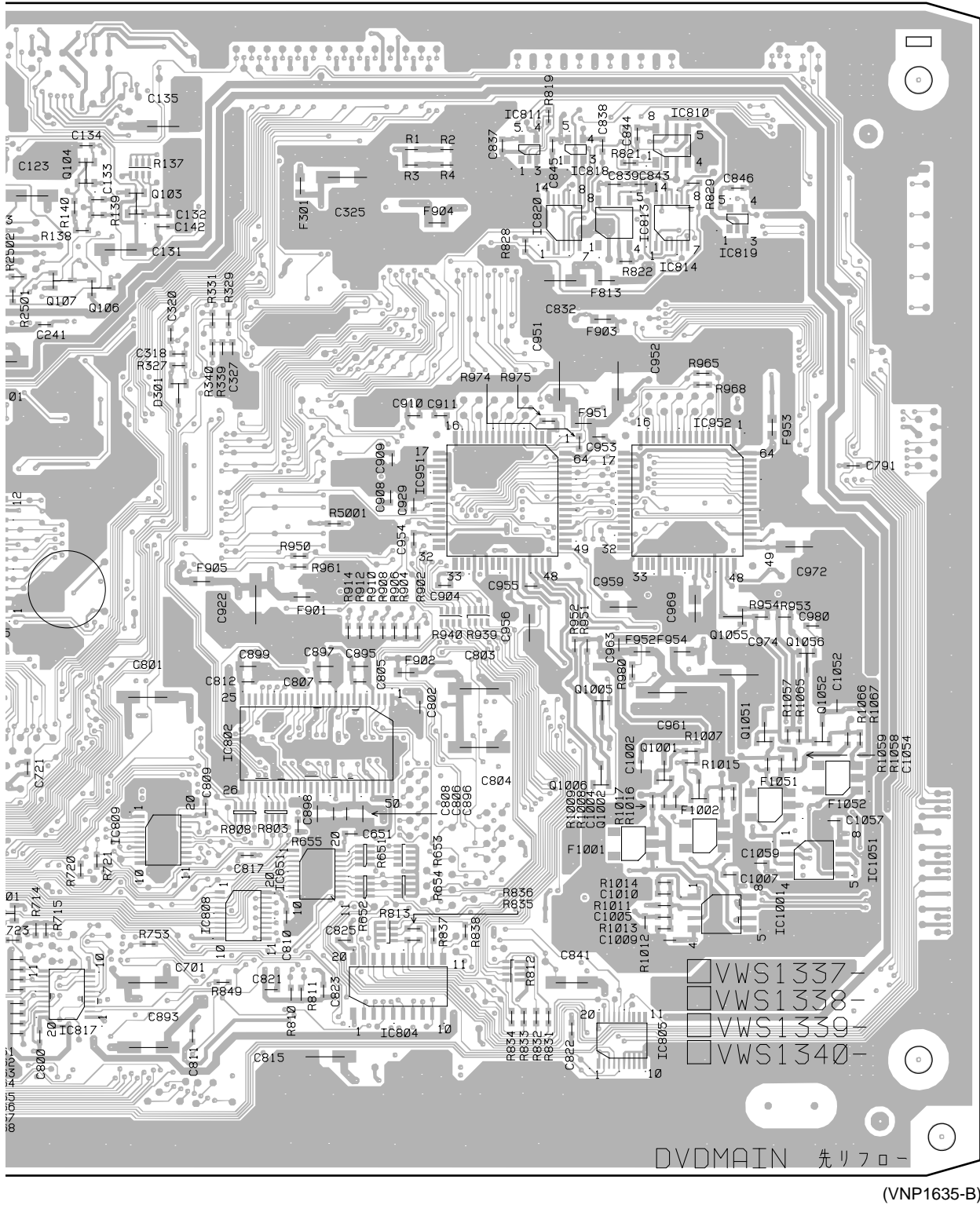


IC652 Q772 IC191 Q261 Q109 Q108 IC101 Q455 Q103-Q107  
IC605 Q771 IC503 IC502 IC504 IC505 IC201 IC301 Q701  
Q601-Q603 IC602 IC603 IC604 IC702 IC817  
IC607 IC608 IC609 IC610 IC611 IC612 IC613 IC614 IC615 IC616 IC617 IC618 IC619 IC620 IC621 IC622 IC623 IC624 IC625 IC626 IC627 IC628 IC629 IC630 IC631 IC632 IC633 IC634 IC635 IC636 IC637 IC638 IC639 IC640 IC641 IC642 IC643 IC644 IC645 IC646 IC647 IC648 IC649 IC650 IC651 IC652 IC653 IC654 IC655 IC656 IC657 IC658 IC659 IC660 IC661 IC662 IC663 IC664 IC665 IC666 IC667 IC668 IC669 IC670 IC671 IC672 IC673 IC674 IC675 IC676 IC677 IC678 IC679 IC680 IC681 IC682 IC683 IC684 IC685 IC686 IC687 IC688 IC689 IC690 IC691 IC692 IC693 IC694 IC695 IC696 IC697 IC698 IC699 IC700 IC701 IC702 IC703 IC704 IC705 IC706 IC707 IC708 IC709 IC710 IC711 IC712 IC713 IC714 IC715 IC716 IC717 IC718 IC719 IC720 IC721 IC722 IC723 IC724 IC725 IC726 IC727 IC728 IC729 IC730 IC731 IC732 IC733 IC734 IC735 IC736 IC737 IC738 IC739 IC740 IC741 IC742 IC743 IC744 IC745 IC746 IC747 IC748 IC749 IC750 IC751 IC752 IC753 IC754 IC755 IC756 IC757 IC758 IC759 IC760 IC761 IC762 IC763 IC764 IC765 IC766 IC767 IC768 IC769 IC770 IC771 IC772 IC773 IC774 IC775 IC776 IC777 IC778 IC779 IC780 IC781 IC782 IC783 IC784 IC785 IC786 IC787 IC788 IC789 IC790 IC791 IC792 IC793 IC794 IC795 IC796 IC797 IC798 IC799 IC800 IC801 IC802 IC803 IC804 IC805 IC806 IC807 IC808 IC809 IC810 IC811 IC812 IC813 IC814 IC815 IC816 IC817 IC818 IC819 IC820 IC821 IC822 IC823 IC824 IC825 IC826 IC827 IC828 IC829 IC830 IC831 IC832 IC833 IC834 IC835 IC836 IC837 IC838 IC839 IC840 IC841 IC842 IC843 IC844 IC845 IC846 IC847 IC848 IC849 IC850 IC851 IC852 IC853 IC854 IC855 IC856 IC857 IC858 IC859 IC860 IC861 IC862 IC863 IC864 IC865 IC866 IC867 IC868 IC869 IC870 IC871 IC872 IC873 IC874 IC875 IC876 IC877 IC878 IC879 IC880 IC881 IC882 IC883 IC884 IC885 IC886 IC887 IC888 IC889 IC890 IC891 IC892 IC893 IC894 IC895 IC896 IC897 IC898 IC899 IC900 IC901 IC902 IC903 IC904 IC905 IC906 IC907 IC908 IC909 IC910 IC911 IC912 IC913 IC914 IC915 IC916 IC917 IC918 IC919 IC920 IC921 IC922 IC923 IC924 IC925 IC926 IC927 IC928 IC929 IC930 IC931 IC932 IC933 IC934 IC935 IC936 IC937 IC938 IC939 IC940 IC941 IC942 IC943 IC944 IC945 IC946 IC947 IC948 IC949 IC950 IC951 IC952 IC953 IC954 IC955 IC956 IC957 IC958 IC959 IC960 IC961 IC962 IC963 IC964 IC965 IC966 IC967 IC968 IC969 IC970 IC971 IC972 IC973 IC974 IC975 IC976 IC977 IC978 IC979 IC980 IC981 IC982 IC983 IC984 IC985 IC986 IC987 IC988 IC989 IC990 IC991 IC992 IC993 IC994 IC995 IC996 IC997 IC998 IC999 IC1000

**SIDE B**



- This PCB is a four-layered board.  
Middle layer is mainly connected to Vcc and GND.

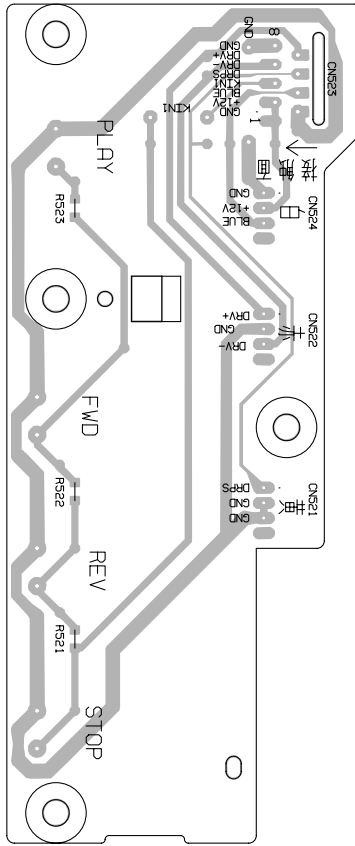


SIDE B

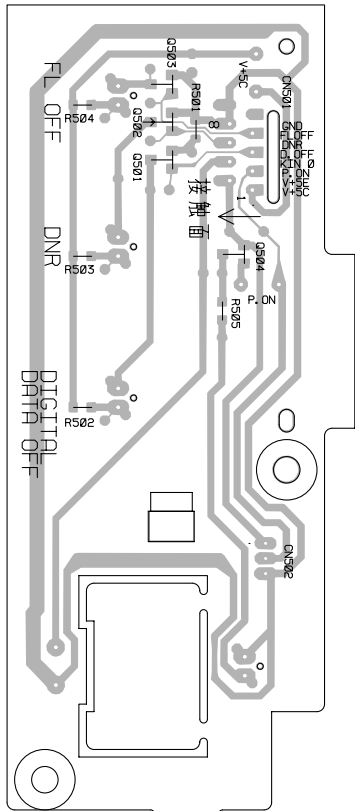




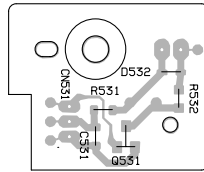




**K** PWSB ASSY



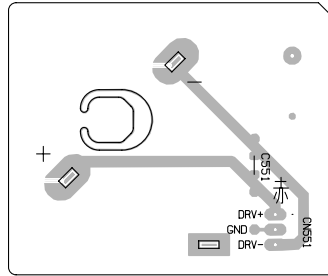
**J** PLSB ASSY



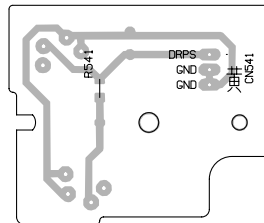
**I** FLKB ASSY

**L** LEDB ASSY

**O** DRMB ASSY



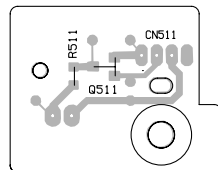
**N** DRSB ASSY



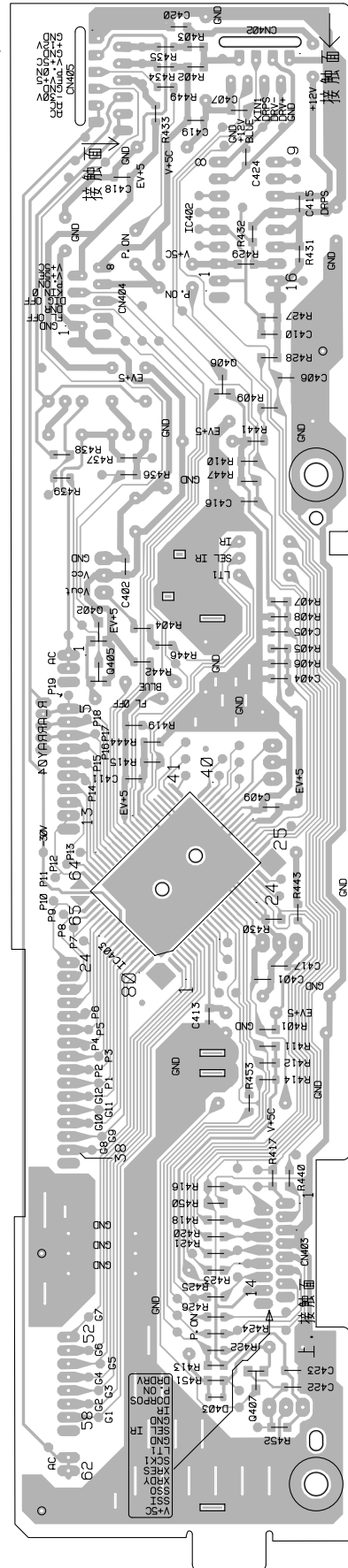
Q503  
Q502  
Q501  
  
Q504

(VNP1637-C)

**M** STBY ASSY



**SIDE B**



Q406

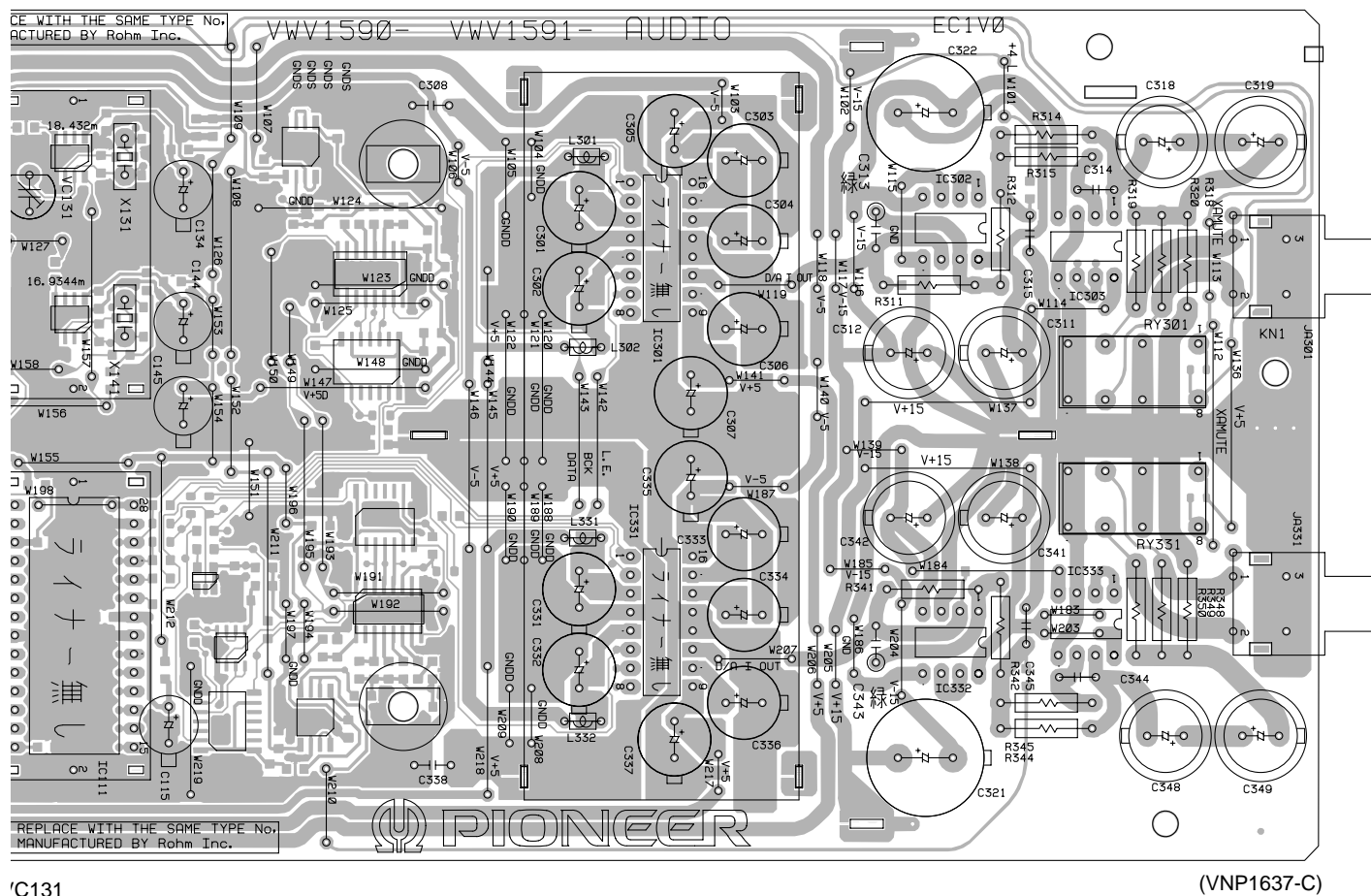
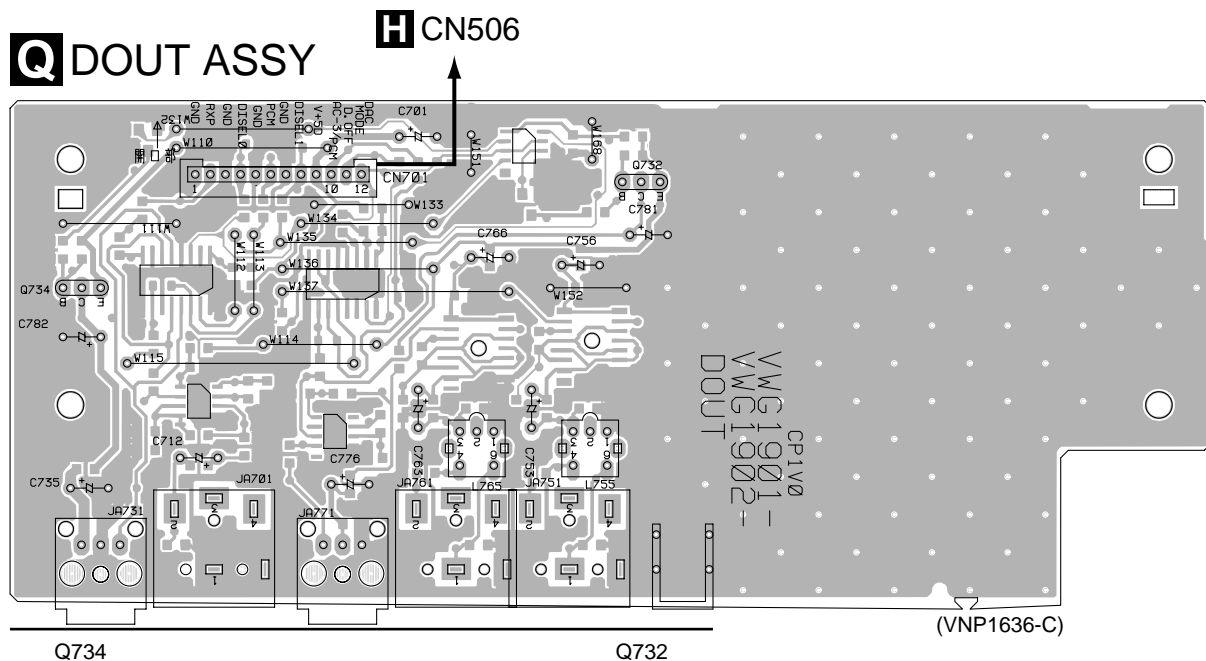
Q402

Q405

IC403

Q407

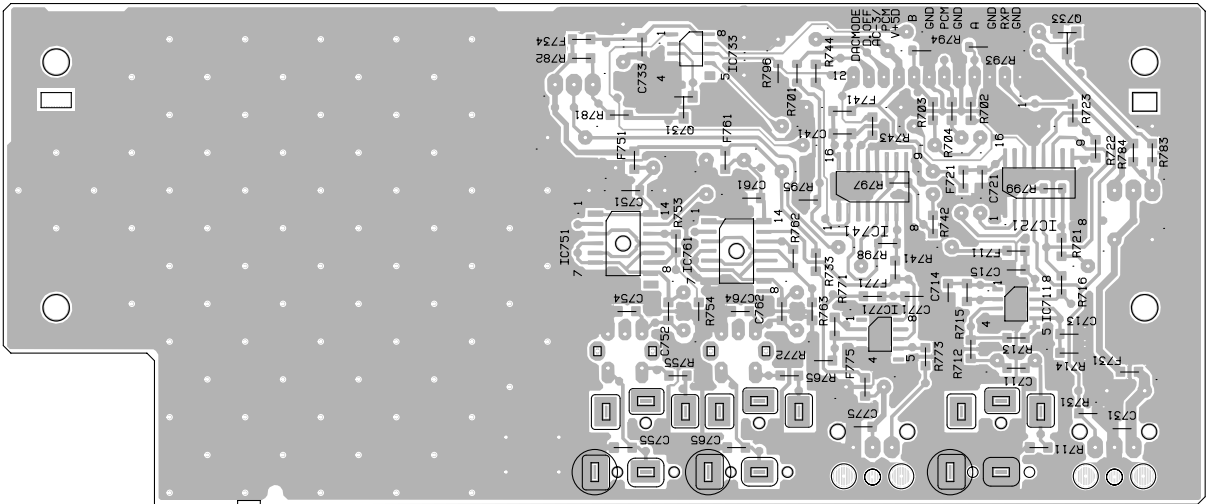




**SIDE A**

**Q R**

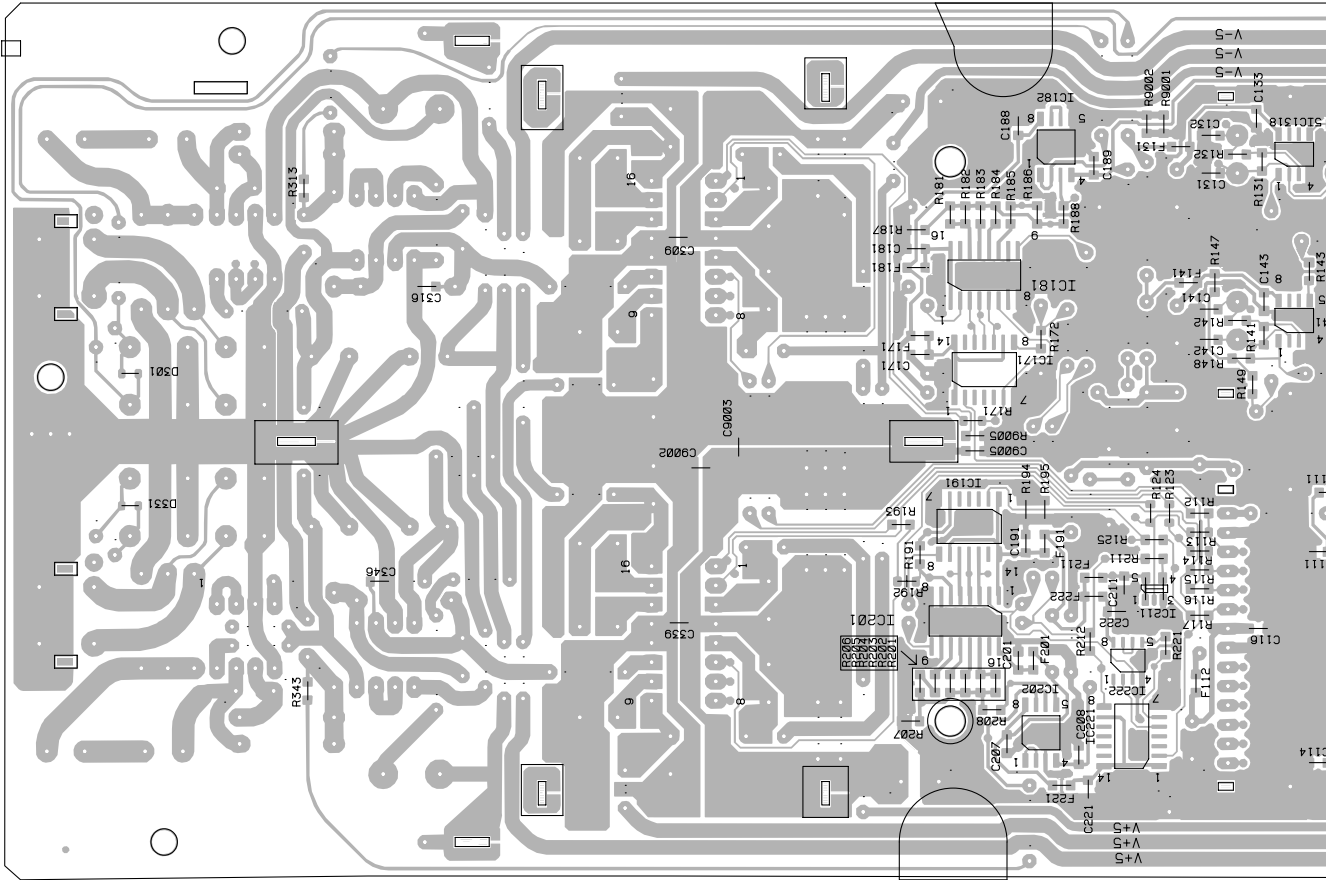
**Q** DOUT ASSY



(VNP1636-C)

IC751	IC733	IC761	IC741	IC721	Q733
Q731			IC771	IC711	

**R** AUDIO ASSY



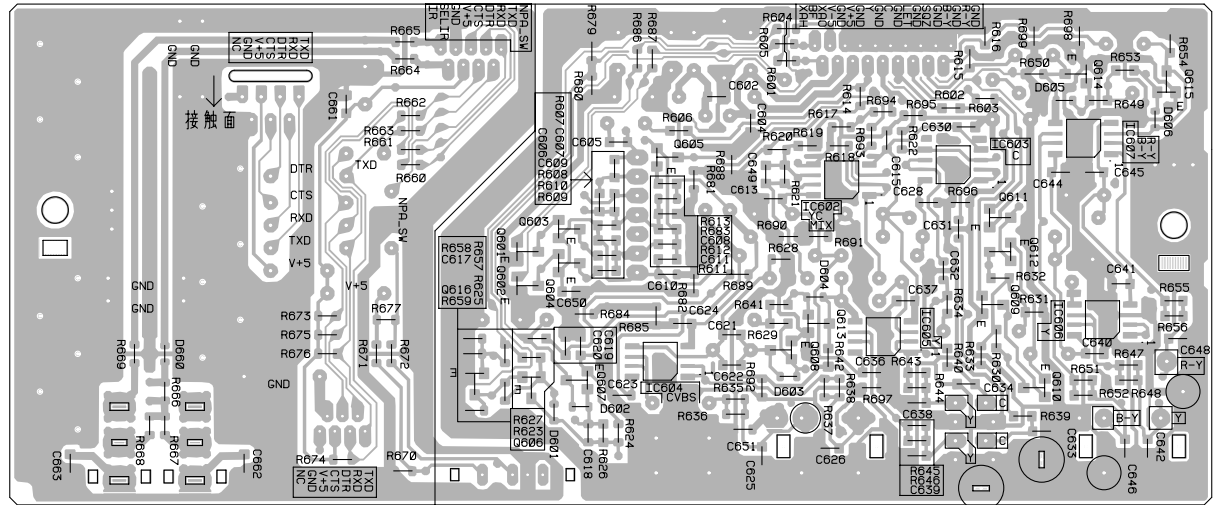
(VNP1637-C)

IC191	IC181	IC182	IC222	IC211	IC131
IC201	IC171	IC202	IC221		IC141

**SIDE B**

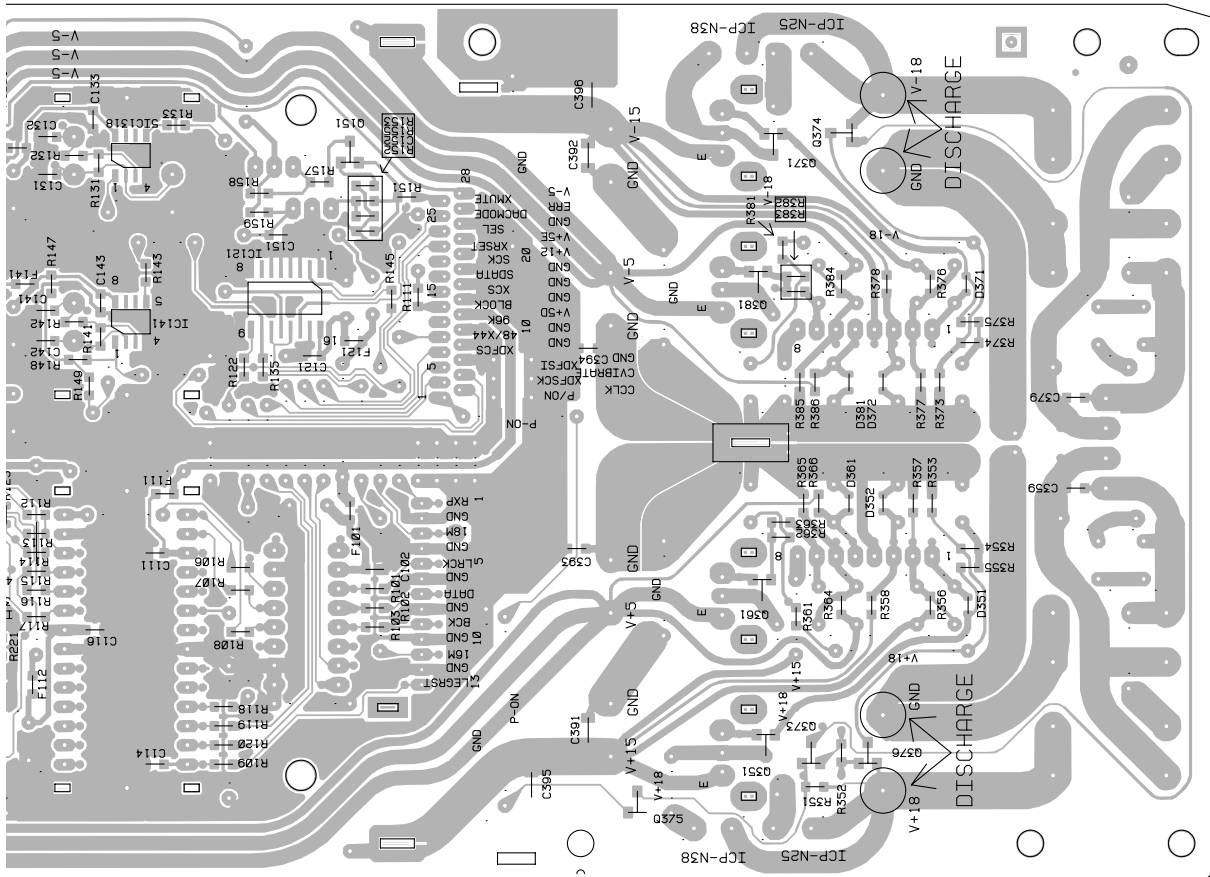


# P VOUT ASSY



(VNP1636-C)

Q616 Q601-Q607 IC604

Q608 IC602 IC603 Q614 Q615  
Q613 IC605 Q609-Q612 IC607 IC606IC211 IC131 IC121 Q151  
IC141Q375 Q381 Q371 Q374  
Q351 Q361 Q373 Q376

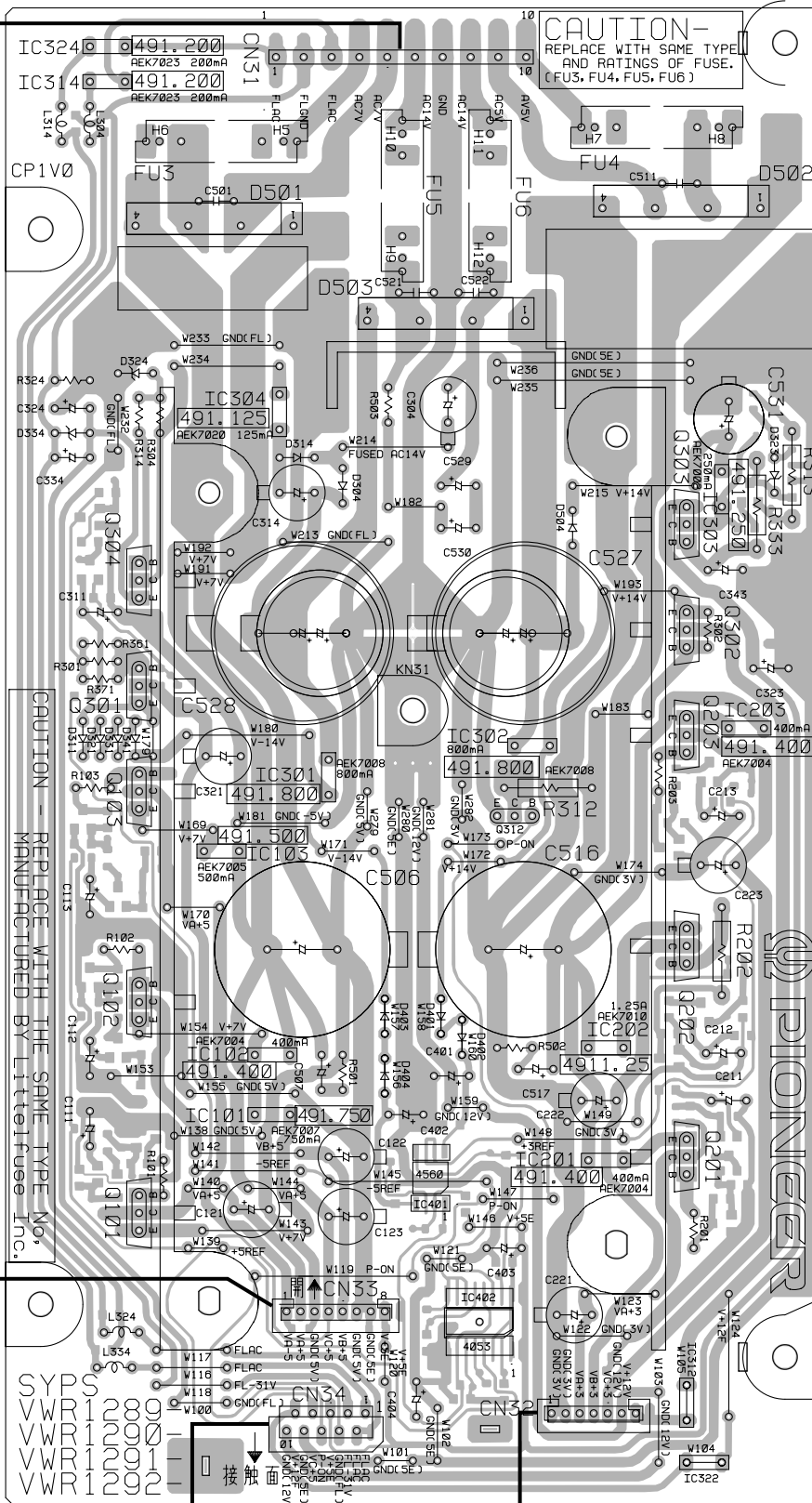
SIDE B

P R

# 4.6 SYPS ASSY

## T SYPS ASSY

**G** CN22



IC324  
IC314

IC304

IC303

Q303

Q304

Q302

Q301

IC201

Q201

IC302

IC301

Q103

Q312

IC103

Q202

Q102

IC202

IC102

IC101

Q203

IC203

Q101

IC312

IC322

**H** CN501

**I** CN405

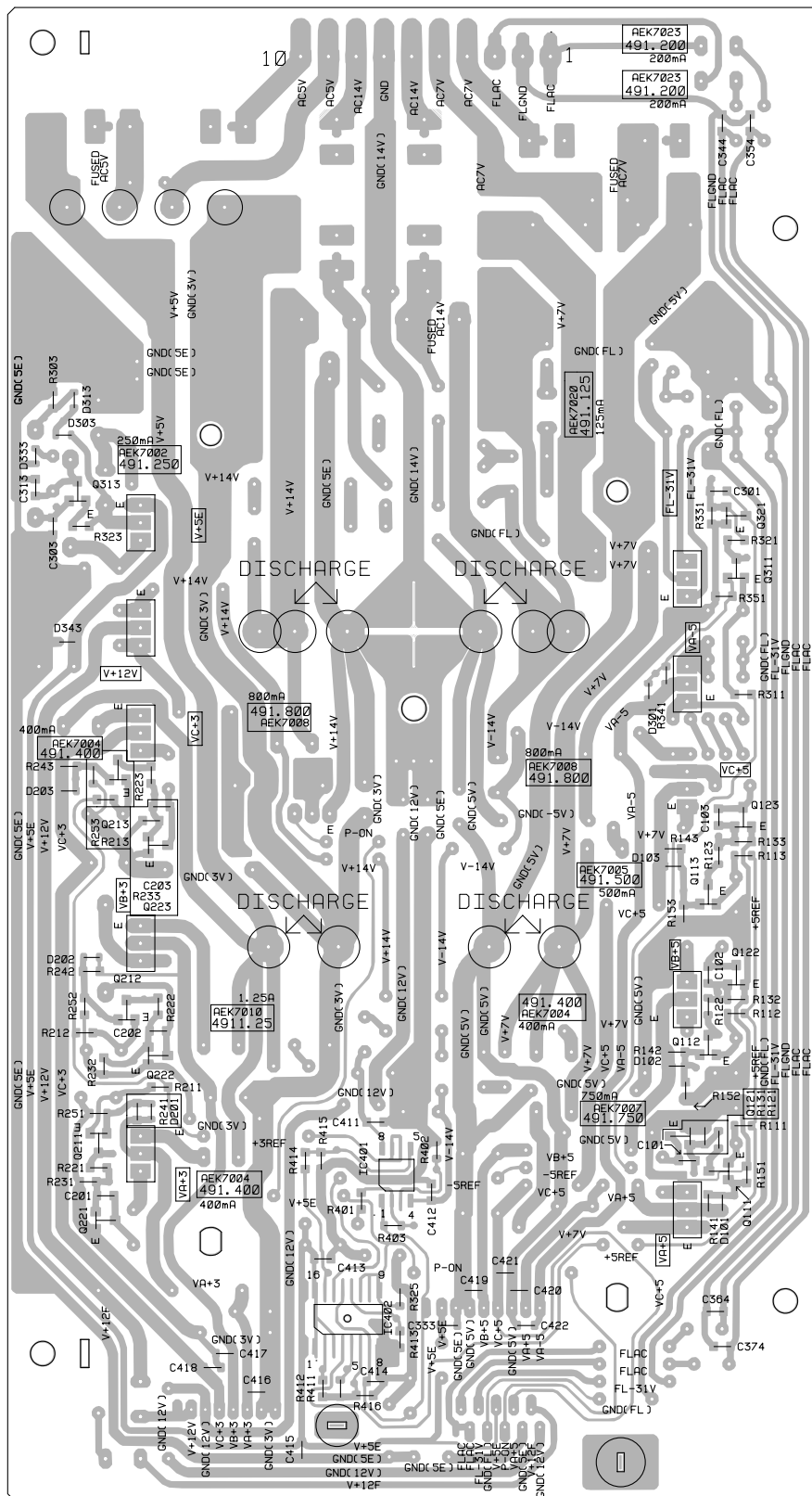
**H** CN502

**SIDE A**

**T**



## T SYPS ASSY



(VNP1636-C)

## SIDE B



## 5. PCB PARTS LIST

NOTES: ● Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.

● The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

● When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 →  $56 \times 10^1$  → 561 ..... RD1/4PU  $\boxed{5}\boxed{6}\boxed{1}J$

47k →  $47 \times 10^3$  → 473 ..... RD1/4PU  $\boxed{4}\boxed{7}\boxed{3}J$

0.5 → R50 ..... RN2H  $\boxed{R}\boxed{5}\boxed{0}K$

1 → 1R0 ..... RS1P  $\boxed{1}\boxed{R}\boxed{0}K$

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k →  $562 \times 10^1$  → 5621 ..... RN1/4PC  $\boxed{5}\boxed{6}\boxed{2}\boxed{1}F$

### 5.1 LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol and Description	Part No.		Remarks
		DV-09 /KU/CA	DV-S9 /L/TA	
NSP	LOAB ASSY	VWM1798	VWM1798	
NSP	└ LOMB ASSY	VWG1886	VWG1886	
NSP	└ LOSB ASSY	VWG1885	VWG1885	
NSP	SMEB ASSY	VWM1797	VWM1797	
NSP	└ INSB ASSY	VWG1883	VWG1883	
NSP	└ FGSB ASSY	VWG1884	VWG1884	
	DVD MAIN ASSY	VWS1337	VWS1337	
NSP	SYOUT ASSY	VWM1812	VWM1811	
	└ DIRB ASSY	Not used	VWG1897	
	└ DOUT ASSY	VWG1902	VWG1901	
	└ VOUT ASSY	VWG1905	VWG1905	
	└ SYPS ASSY	VWR1289	VWR1289	
NSP	└ LSFB ASSY	VWR1293	VWR1293	
NSP	FLAUD ASSY	VWM1816	VWM1817	
	└ FLKBASSY	VWG1910	VWG1911	
NSP	└ PLSB ASSY	VWG1913	VWG1913	
NSP	└ PWSB ASSY	VWG1916	VWG1916	
NSP	└ LEDB ASSY	VWS1919	VWS1919	
NSP	└ STBY ASSY	VWG1922	VWG1922	
NSP	└ DRSB ASSY	VWG1930	VWG1930	
NSP	└ DRMB ASSY	VWG1932	VWG1932	
NSP	└ TRSA ASSY	VWR1298	VWR1297	
NSP	└ TRSB ASSY	VWR1300	VWR1300	
	└ AUDIO ASSY	VWV1591	VWV1590	

#### TRSA ASSY

VWR1298 and VWR1297 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		VWR1298	VWR1297	
	J11	VKP2186	VKP2165	

#### FLKB ASSY

VWG1910 and VWG1911 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		VWG1910	VWG1911	
	R407	RS1/10S123J	RS1/10S472J	
	R408	RS1/10S202J	RS1/10S123J	

## AUDIO ASSY

VWV1591 and VWV1590 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		VWV1591	VWV1590	
	F101,F111 (CHIP BEAD) F133,F143 (CHIP BEAD)	Not used DTF1069	DTF1070 Not used	
	C351,C371 (2200 $\mu$ F/50V) C356,C366,C376,C386 (220 $\mu$ F/50V) C391,C392 C393,C394	VCH1160 VCH1161 CKSYF225Z25 CKSQYF225Z16	VCH1125 VCH1140 Not used Not used	
	R111 R133,R143 R147-R149 R314,R344	RS1/10S0R0J Not used RS1/10S103J RDR1/2PM222J	Not used RS1/10S101J Not used RDR1/2PM242J	
	JA301 (2P PIN JACK) JA331 (2P PIN JACK)	VKB1095 VKB1096	VKB1103 VKB1104	

## DOUT ASSY

VWG1902 and VWG1901 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		VWG1902	VWG1901	
	IC711 IC721,IC741 IC733 Q731,Q733 Q732,Q734	Not used Not used Not used Not used Not used	TC7WU04F TC74HC153AF TC7W08F PDTTC124EK 2SB1237X	
	F711,F721,F731,F734,F741 (CHIP BEAD) C711 C712 C713 C714	Not used Not used Not used Not used Not used	DTF1070 CKSQYF103Z50 CEBA470M10 CCSQCH101J50 CCSQCH220J50	
	C715,C721,C731,C733,C741 C735,C781,C782 (100 $\mu$ F/10V) R711 R712,R723,R743,R744 R713	Not used Not used Not used Not used Not used	CKSQYF104Z25 VCH1100 RS1/10S750J RS1/10S0R0J RS1/10S473J	
	R714 R715,R716,R722 R731 R781-R784 R797-R799	Not used Not used Not used Not used RS1/10S0R0J	RS1/10S222J RS1/10S101J RS1/10S223J RS1/10S472J Not used	
	JA701 (1P PIN JACK) JA731 (OPTICAL OUTPUT)	Not used Not used	PKB1004 GP1F32R	

## 5.2 PARTS LIST FOR DV-09

Mark	No.	Description	Part No.
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**LOAD ASSY****OTHERS**

PC BOARD LOAB	VNP1628
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**A LOMB ASSY****OTHERS**

CN401 KR CONNECTOR	B2B-PH-K-S
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**B LOSB ASSY****SWITCH**

S301	VSK1011
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**OTHERS**

CN303 KR CONNECTOR	B2B-PH-K-S
CN302 8P FFC CONNECTOR	VKN1268
CN301 12P FFC CONNECTOR	VKN1272

**SMEB ASSY****OTHERS**

PC BOARD (SMEB)	VNP1627
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**C INSB ASSY****SWITCH**

S201	DSG1017
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**OTHERS**

CN201 KR CONNECTOR 3P	B3B-PH-K-S
PCB BINDER	DEF1012
CN202 8P FFC CONNECTOR	VKN1239

**D FGSB ASSY****SEMICONDUCTOR**

PC101	GP2S27(B)
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**RESISTORS**

All Resistors	RS1/10S□□□J
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**OTHERS**

CN101 KR CONNECTOR 3P	B3B-PH-K-S
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**E LSFB ASSY****COILS AND FILTERS**

△ L11 (0.8mH/ 6A)	DTH1164
△ L12 FILTER	VTL-004

Mark	No.	Description	Part No.
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**CAPACITORS**

△ C11-C14 (10000pF/ AC250V)	ACG7020
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**OTHERS**

H1-H4 FUSE CLIP	AKR1003
△ CN2 2P-VH CONNECTOR	B2P3-VH
PCB BINDER	VEF1040
△ TERMINAL	VKC-019
KN1 EARTH METAL FITTING	VNF1084

**F TRSA ASSY****OTHERS**

CN12 4P-VH CONNECTOR	B4P-VH
△ J11 HOUSING ASSY	VKP2186

**G TRSB ASSY****OTHERS**

△ CN21 2P-VH CONNECTOR	B2P3-VH
PCB BINDER	VEF1040

**H DVD MAIN ASSY****SEMICONDUCTORS**

IC171	BA10393F
IC161	BA6195FP
IC151	BA6797FP
IC813	CY2081SL-611
IC702	HM514800CJ-7
IC101	LA9700M
IC201	LC78650NE
IC902,IC903	M5M4V4265CTP-6
IC951,IC952	M65677FP
IC802	MB811171622A-100FN
IC801	MB86371
IC1001,IC1051	MC14577CF
IC271,IC302	NJM2100M
IC203	NJM2107F
IC901	PD0259A
IC601	PD3381A
IC701	PD4833A
IC501	PD4889A
IC602	PDK026C
IC502	SRM2B256SLMX70
IC202,IC204,IC251	TC4W53F
IC604	TC551001BFL-85
IC503	TC74HC573AF
IC804	TC74HCT541AF
IC303	TC74HCU04AF

## DV-09, DV-S9

Mark	No.	Description	Part No.
	IC807,IC808		TC74LCX245FT
	IC821		TC74VHC00FT
	IC814,IC820		TC74VHC02FT
	IC505,IC605		TC74VHC139FT
	IC504		TC74VHC20FT
	IC805,IC806,IC809		TC74VHC541FT
	IC651		TC74VHC574FT
	IC506		TC74VHCT245AFT
	IC817		TC74VHCT541AFT
	IC652		TC7SH32F
	IC811,IC818,IC819		TC7SHU04F
	IC810		TC7WU04F
	IC301		TLC5540INS
	IC603		VKH1012
	IC6003		VYW1558
	Q1001,Q1002,Q1051,Q1052		2SC2412K
	Q701		2SK2033
	Q108		HN1K03FU
	Q455		IMT1A
	Q103		IMX1
	Q102,Q104,Q291,Q301		IMZ1A
	Q106,Q603		PDTA114EK
	Q1005,Q1006,Q1055,Q1056		PDTA143EK
	Q107,Q109,Q261,Q602		PDTC114EK
	Q601,Q771,Q772		PDTC114TK
	D301		KV1410
	D171,D172		MA152WK
	D601		RB501V-40

### COILS AND FILTERS

	F101,F141,F151,F161 (CHIP BEADS)	DTF1070
	F201-F203,F301,F501,F601	DTF1070
	F701-F703,F801-F805,F813	DTF1070
	F901-F905,F951-F954	DTF1070
	L777-L787 (CHIP SOLID INDUCTOR)	QTL1011
	F1001,F1002,F1051,F1052 (LPF)	VTF1101
	F401-F411 (CHIP EMI FILTER)	VTH1037
	L301 (1.5μH)	VTL1059
	L101,L302 (10μH)	VTL1061
⚠	L896,L897 (CHIP BEADS)	VTL1074
⚠	L895,L898,L899 (CHIP BEADS)	VTL1075

### CAPACITORS

C152,C208,C291,C612,C613	CCSRCH101J50
C111,C139,C215,C231-C233	CCSRCH151J50
C125,C148,C329	CCSRCH180J50
C112,C118	CCSRCH220J50
C121,C130,C199,C319,C324	CCSRCH330J50
C120	CCSRCH331J50
C310,C323	CCSRCH470J50
C230	CCSRCH471J50
C126,C331,C838	CCSRCH560J50
C1010,C1012,C1060,C1062,C127	CCSRCH5R0C50

Mark	No.	Description	Part No.
	C330		CCSRCH5R0C50
	C160		CCSRCH680J50
	C1001,C1003,C1006,C1008,C101		CEV101M6R3
	C104,C1051,C1053,C1056,C1058		CEV101M6R3
	C201,C325,C421,C499,C601		CEV101M6R3
	C701,C704,C706,C741,C742		CEV101M6R3
	C901,C902,C905,C912,C913		CEV101M6R3
	C917,C918,C922,C923		CEV101M6R3
	C951,C952,C961,C964,C965		CEV101M6R3
	C974		CEV101M6R3
	C123,C158,C264		CEV220M16
	C801,C803,C804,C813-C815		CEV221M4
	C826,C835,C892-C894		CEV221M4
	C956,C959,C969,C972		CEV2R2M50
	C415,C417,C419		CEV330M25
	C131,C135,C205,C206,C301		CEV470M6R3
	C303,C401,C403,C405,C407		CEV470M6R3
	C409,C411,C413,C501,C504		CEV470M6R3
	C832,C836,C841		CEV470M6R3
	C211		CKSQYB104K25
	C109,C124,C216,C220,C229		CKSQYB105K10
	C234,C261,C275,C308,C326		CKSQYB105K10
	C895-C899		CKSQYF225Z16
	C213,C292,C309,C321		CKSRYB102K50
	C105,C106,C108,C146,C147		CKSRYB103K50
	C151,C154-C157,C161,C207		CKSRYB103K50
	C217,C221,C263,C265,C276		CKSRYB103K50
	C318,C320,C620,C705,C722		CKSRYB103K50
	C772		CKSRYB103K50
	C143,C162-C165,C223,C224		CKSRYB104K16
	C242,C274,C311,C312,C315		CKSRYB104K16
	C141		CKSRYB222K50
	C328		CKSRYB223K25
	C262,C271		CKSRYB472K50
	C122		CKSRYB473K16
	C1002,C1004,C1007,C1009		CKSRYF104Z16
	C102,C103,C1052,C1054,C1057		CKSRYF104Z16
	C1059,C113,C129,C132-C134		CKSRYF104Z16
	C136,C159,C166,C191		CKSRYF104Z16
	C202-C204,C209,C214		CKSRYF104Z16
	C218,C219,C222,C226-C228		CKSRYF104Z16
	C235,C237,C241,C251,C273		CKSRYF104Z16
	C302,C304,C305,C317,C322		CKSRYF104Z16
	C402,C404,C406,C408,C410		CKSRYF104Z16
	C412,C414,C416,C418,C420		CKSRYF104Z16
	C422,C502,C503,C505-C509		CKSRYF104Z16
	C602-C611,C614-C617		CKSRYF104Z16
	C621,C622,C651,C652		CKSRYF104Z16
	C702,C703,C707-C721,C743		CKSRYF104Z16
	C791,C800,C802,C805-C812		CKSRYF104Z16
	C816-C825,C827-C830		CKSRYF104Z16
	C833,C834,C837,C839,C840		CKSRYF104Z16
	C842-C848,C903,C904		CKSRYF104Z16
	C906-C911,C914-C916		CKSRYF104Z16
	C919-C921,C924-C926		CKSRYF104Z16

Mark	No.	Description	Part No.
		C953-C955,C960,C963	CKSRYF104Z16
		C966-C968,C973,C976	CKSRYF104Z16
		C962,C975 (47μF/6.3V)	VCH1158
		VC301 (40pF)	VCM1010

**RESISTORS**

R915-R920,R923-R926	RA4C0R0J
R507,R508,R624,R628,R633	RA4C103J
R653,R654,R703,R704	RA4C103J
R717,R718,R745,R746,R792	RA4C103J
R812,R813	RA4C103J
R137,R501,R502,R505,R506	RA4C220J
R602-R607,R610,R613,R618	RA4C220J
R651,R652,R712,R713,R719	RA4C220J
R724,R748,R749,R752,R791	RA4C220J
R802,R803,R808,R927,R928	RA4C220J
R933,R934	RA4C220J
R319,R401-R411,R799	RS1/10S0R0J
R205	RS1/10S101J
R117,R118	RS1/16S1501F
R126	RS1/16S1502F
R241	RS1/16S2202F
R110,R153,R155,R173,R174	RS1/16S2702F
R213,R228-R230	RS1/16S2702F
R152,R156,R158-R164	RS1/16S4702F
R167-R170,R172,R175,R194	RS1/16S4702F
R227	RS1/16S4702F
VR951-VR954 (1kΩ)	VCP1125
Other Resistors	RS1/10S□□□ J

**OTHERS**

CN506	3P PH CONNECTER	S12B-PH-SM3
CN505	13P PH CONNECTER	S13B-PH-SM3
CN502	7P PH CONNECTER	S7B-PH-SM3
CN501	8P PH CONNECTER	S8B-PH-SM3
	FLEXIBLE CABLE	VDA1681
TP100,TP200,TP300		VKF1001
TP400,TP800,TP900		VKF1001
CN201	14P CONNECTER	VKN1324
CN507	9P FFC CONNECTER	VKN1413
CN107	12P FFC CONNECTER	VKN1416
CN503	14P FFC CONNECTER	VKN1418
CN508	19P FFC CONNECTER	VKN1423
CN504	28P FFC CONNECTER	VKN1432
CN102	20P FFC CONNECTER	VKN1460
KN501-KN504		VNF1109
	LABEL	VRW1634
X602	CERAMIC RESONATOR (20MHz)	VSS1114
X501	CERAMIC RESONATOR (10MHz)	VSS1115

Mark	No.	Description	Part No.
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**I FLKB ASSY****SEMICONDUCTORS**

IC402	BA6195
IC403	PD4890A
IC401,IC404	PST994C
Q403,Q404	2SD1858X
Q402,Q405,Q406	PDTA124EK
Q407	PDTC124EK
D401,D402	1SR139-400-TA
D403	MA111

**COILS AND FILTERS**

F401-F404	DTF1070
L401	VTH1024

**CAPACITORS**

C403,C408,C421	CEAL470M6R3
C406,C407,C416	CKSQYF102Z50
C401,C402,C404,C405	CKSQYF103Z50
C409-C411,C413,C417-C420	CKSQYF103Z50
C422,C423	CKSQYF103Z50
C415	CKSQYF104Z25

**RESISTORS**

R497	RA3T104J
R429,R432	RS1/10S1002F
R427,R431	RS1/10S2002F
R428	RS1/10S3002F
Other Resistors	RS1/10S□□□ J

**OTHERS**

CN404	8P FFC CONNECTOR	52045-0845
CN402	8P FFC CONNECTOR	52492-0820
CN405	10P FFC CONNECTOR	52492-1020
401	REMOTE RECEIVER UNIT	GP1U27X
V401	FL TUBE	VAW1047
CN403	14P CONNECTOR	VKN1218
X401	CERAMIC RESONATOR(5MHZ)	VSS1104

**J PLSB ASSY****SWITCHES**

S521-S524	RSG1030
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**RESISTORS**

All Resistors	RS1/10S□□□ J
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**OTHERS**

CN523	8P FFC CONNECTOR	52492-0820
CN524	3P KR CONNECTOR	S3B-PH-K-S



Mark	No.	Description	Part No.
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## **K** PWSB ASSY

### SEMICONDUCTORS

Q501-Q503	PDTC124EK
D501-D503	SLP9118C51H

### SWITCH

S501	RSG1030
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### RESISTORS

All Resistors	RS1/10S□□□ J
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### OTHERS

CN501	8P FFC CONNECTOR	52492-0820
CN502	3P KR CONNECTOR	S3B-PH-K-S

## **L** LEDB ASSY

### SEMICONDUCTORS

Q531	PDTC124EK
D531	LNG989CNBW
D532	UDZS6.2B

### CAPACITOR

C531	CKSQYF103Z50
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### RESISTORS

All Resistors	RS1/10S□□□ J
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### OTHERS

CN531	3P KR CONNECTOR	B3B-PH-K-S
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## **M** STBY ASSY

### SEMICONDUCTORS

Q511	PDTA124EK
D511	BR3365S

### RESISTORS

All Resistors	RS1/10S□□□ J
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### OTHERS

CN511	3P KR CONNECTOR	S3B-PH-K-S
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## **N** DRSB ASSY

### SWITCHES

S541,S542	DSG1017
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### RESISTORS

All Resistors	RS1/10S□□□ J
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Mark	No.	Description	Part No.
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## **O** DRMB ASSY

This Assy has no service part.

## **P** VOUT ASSY

### SEMICONDUCTORS

IC602-IC607	MC14577CF
IC601	TA7302P
Q607	2SA1037K
Q605,Q606,Q608,Q613-Q615	2SC2412K
Q610,Q612	PDTA124EK

Q603,Q604	PDTA143EK
Q609,Q611	PDTC124EK
Q601,Q602	PDTC143EK
D601,D602,D660	1SS355

### COILS

L601,L602	LAU470J
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### CAPACITORS

C649	CCSQCH100D50
C618	CCSQCH102J50
C605,C622	CCSQCH390J50
C621	CCSQCJ3R0C50
C616,C635,C643,C647	CEAT100M50

C601,C603,C612,C614,C627	CEAT470M16
C629,C660	CEAT470M16
C606-C611,C631,C632	CKSQYB103K50
C602,C604,C613,C615	CKSQYF104Z25
C619,C620,C623,C624,C628	CKSQYF104Z25

C630,C636,C637,C640,C641	CKSQYF104Z25
C644,C645,C661-C663	CKSQYF104Z25

### RESISTORS

R620,R621	RN1/10SE1001D
R617,R618	RN1/10SE2201D
R614,R622,R635,R637	RS1/10S68R0F
R639,R640,R643,R645,R647	RS1/10S68R0F
R651,R655	RS1/10S68R0F

Other Resistors	RS1/10S□□□ J
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### OTHERS

JA604,JA605	JACK	RKN1004
JA603	3P PIN JACK	VKB1100
JA601	2P PIN JACK	VKB1101
JA602	S-TERMINAL SOCKET	VKN1446
CN603	7P FFC CONNECTOR	VKN1267

CN602	9P FFC CONNECTOR	VKN1269
CN601	19P FFC CONNECTOR	VKN1279
KN601	EARTH METAL FITTING	VNF1084
KN602	EARTH METAL FITTING	VNF1084
	SCREW PLATE	VNE1948

Mark	No.	Description	Part No.
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## Q DOUT ASSY

### SEMICONDUCTORS

IC751,IC761 IC771	TC74HCU04AF TC7WU04F
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### COILS AND FILTERS

F751,F761,F771,F775 (CHIP BEADS)	DTF1070
L755,L765 (PULSE TRANSFORMER)	PTL1003

### CAPACITORS

C754,C764 C753,C763 C752,C755,C762,C765 C751,C761,C771,C775 C701,C756,C766,C776 (100μF/10V)	CCSQCH101J50 CEBA470M10 CKSQYF103Z50 CKSQYF104Z25 VCH1100
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### RESISTORS

All Resistors	RS1/10S□□□ J
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### OTHERS

JA771	OPTICAL LINK OUT	GP1F32T
JA751	1P PIN JACK	PKB1004
JA761	JACK	VKB1076
	SCREW PLATE	VNE1948

## R AUDIO ASSY

### SEMICONDUCTORS

△ IC361,IC381	ICP-N25
△ IC352,IC372	ICP-N38
IC351,IC371	NJM4580L
IC182,IC202	NJM4580M
IC302,IC303,IC332,IC333	NJM5532DD
IC131,IC141	NJU6322KE
IC301,IC331	PCM1702P-J
IC101	PD0236AD
IC111	PD7009B
IC151	PST994C
IC121	TC74HC153AF
IC181,IC201	TC74HC163AF
IC171,IC191,IC221	TC74HC164AF
IC211	TC7S08F
IC222	TC7W00F
△ Q151,Q371,Q373,Q381	2SA1037K
△ Q372,Q382	2SA1262
△ Q351,Q361	2SC2412K
△ Q352,Q362	2SC3179
△ Q153	2SD1858X
Q376	PDTA124EK
Q374,Q375	PDTC124EK
△ D391,D392,D397,D398	30DF2-FC5
△ D393-D396	30DF2-FC6
D301,D331	MA111

Mark	No.	Description	Part No.
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D361,D381 D351,D352,D371,D372	UDZ3.6B UDZS5.6B
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### RELAY

RY301,RY331	RSR1026
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### COILS AND FILTERS

△ F133,F143 (CHIP BEAD)	DTF1069
F171,F112,F121,F131 (CHIP BEAD)	DTF1070
F141,F181,F191,F201	DTF1070
F211,F221,F222	DTF1070
L301,L302,L331,L332 (FERRITE BEAD)	VTH1020

### CAPACITORS

C114	CCSQCH102J50
C141	CCSQCH120J50
C142	CCSQCH150J50
C132	CCSQCH270J50
C309,C316,C339,C346	CCSQCH391J50

C131	CCSQCH8R0D50
C101,C115,C122,C134	CEBA101M16
C144,C145	CEBA101M16
C352,C355,C362,C365,C372	CEBA101M25
C375,C382,C385	CEBA101M25

C301,C302,C305,C307	CEBA470M63
C331,C332,C335,C337	CEBA470M63
C311,C312,C318,C319	CEGA101M50
C341,C342,C348,C349	CEGA101M50
C303,C304,C306,C333,C334	CEGA470M35

C336	CEGA470M35
C354,C364,C374,C384	CEGA4R7M50
C357,C358,C377,C378	CEZA1R0M50
C308,C338	CKCYB102K50
C359,C379	CKSQYF103Z50

C102,C111,C116,C121,C133	CKSQYF104Z25
C143,C151,C152,C171,C181	CKSQYF104Z25
C188,C189,C191,C201	CKSQYF104Z25
C207,C208,C211,C221,C222	CKSQYF104Z25
C393,C394	CKSQYF225Z16

C391,C392	CKSYF225Z25
C353,C363,C373,C383	CMA101J2H
C314,C344 (0.00082μF)	VCE1029
C315,C345 (3000pF)	VCE1033
C313,C343 (220pF)	VCE1034

C351,C371 (2200μF/50V)	VCH1160
C356,C366,C376,C386 (220μF/50V)	VCH1161
VC131 (20pF)	DCM1005

### RESISTORS

R318,R348	RDR1/2PM104J
R315,R345	RDR1/2PM122J
R314,R344	RDR1/2PM222J
R312,R342	RDR1/2PM242J
R311,R341	RDR1/2PM272J

R319,R320,R349,R350	RDR1/2PM471J
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## DV-09, DV-S9

Mark	No.	Description	Part No.
	R359,R379		RDR1/4PM8R2J
	Other Resistors		RS1/10S□□□ J

### OTHERS

CN101	13P KR CONNECTOR	B13B-PH-K-S
CN351	4P VH CONNECTOR	B4P-VH
	SCREW	BBZ30P050FCC
JA301	2P PIN JACK	VKB1095
JA331	2P PIN JACK	VKB1096
CN111	28P FFC CONNECTOR	VKN1204
KN1	EARTH METAL FITTING	VNF1084
	BUS LINE PLATE B	VNF1113
	BUS LINE PLATE C	VNF1114
X141	CRYSTAL RESONATOR (16.9344MHz)	VSS1123
X131	CRYSTAL RESONATOR (18.432MHz)	VSS1124

## S DIRB ASSY (DV-S9 only)

### SEMICONDUCTORS

IC861	CD0015AF
IC821,IC901,IC902	TC74HC00AF
IC831	TC74HC153AF
IC811	TC74HC157AF
IC906	TC74HCT32AF
IC903,IC905	TC7W00F
IC841	TC7W04F
IC904	TC7W14F
IC835	TC7W74F
Q911	2PD601A

### COILS AND FILTERS

F811,F821,F831,F835,F841	DTF1070
F861,F863,F901,F903	DTF1070

### CAPACITORS

C862	CCSQCH100D50
C811,C821,C831,C835,C841	CKSQYF104Z25
C861,C863,C864,C901-C903	CKSQYF104Z25
C906,C907	CKSQYF104Z25
C865,C866,C904,C905 (100μF/10V)	VCH1100
C911 (47μF/16V)	VCH1131

### RESISTORS

All Resistors	RS1/10S□□□ J
---------------	--------------

### OTHERS

CN801,CN811 (13P CONNECTOR)	B13B-PH-K-S
CN802,CN812 (28P CONNECTOR)	VKN1204

Mark	No.	Description	Part No.
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## T SYPS ASSY

### SEMICONDUCTORS

△ IC303 (250mA)	AEK7002
△ IC102,IC201,IC203 (400mA)	AEK7004
△ IC103 (500mA)	AEK7005
△ IC101 (750mA)	AEK7007
△ IC301,IC302 (800mA)	AEK7008
△ IC202 (1.25A)	AEK7010
△ IC304 (125mA)	AEK7020
△ IC314,IC324 (200mA)	AEK7023
IC401	BA4560F
IC402	TC74HC4053AF
Q111-Q113,Q211-Q213,Q313	2SA1037K
Q321	2SA1037K
△ Q101-Q103,Q201-Q203,Q302	2SB1375
△ Q304	2SB1375
Q121-Q123,Q221-Q223,Q311	2SC2412K
△ Q301,Q303	2SD2012
△ Q312	DTC124ES
D101-D103,D201-D203,D301	1SS355
D303,D313,D333,D343	1SS355
△ D503	D3SBA20/4103
D323	HZS5C2
D324	MTZJ33B
D334	MTZJ6.2B
△ D501,D502	RBA-406B
△ D304,D314,D504	S5688G

### COILS

L304,L314,L324,L334	LAU1R0J
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### CAPACITORS

C101-C103,C201-C203,C301	CCSQCH121J50
C404	CEAL470M16
C324	CEAT100M50
C314	CEAT101M50
C507,C517,C529,C530	CEAT1R0M50
C403	CEAT470M16
C401,C402	CEAT470M25
C334	CEAT470M50
C527,C528	CEAT682M25
C111-C113,C211-C213,C311	CEHAQ101M10
C323,C343	CEHAQ101M10
C304	CEHAQ101M50
C531	CEHAQ102M25
C121-C123,C321	CEHAQ471M10
C221-C223	CEHAQ471M6R3
C501,C511,C521,C522	CKPUYF223Z25
C303,C313	CKSQYB102K50
C411-C415	CKSQYF104Z25
C344,C354	CKSQYF223Z50
C506 (22000μF/25V)	VCH1159

Mark	No.	Description	Part No.
	C516	(33000μF/10V)	VCH1162

**RESISTORS**

R301,R302,R314	RD1/4PU102J
R324	RD1/4PU103J
R101	RD1/4PU221J
R102,R103,R201,R203	RD1/4PU331J
R501,R502	RD1/4PU331J
R304	RD1/4PU472J
R503	RD1/4PU8R2J
R401,R403	RN1/10SE1002D
R414	RN1/10SE1801D
R415	RN1/10SE3301D
R202	RS1LMF330J
R313,R333	RS1LMF331J
R312	RS1LMF391J
Other Resistors	RS1/10S□□□ J

**OTHERS**

CN34	10P FFC CONNECTOR	52045-1045
H10-H12,H5-H9	(FUSE CLIP)	AKR1003
	HEAT SINK	ANH7045
CN32	7P KR CONNECTOR	S7B-PH-K-S
	PCB BINDER	VEF1040
	HEAT SINK	VNE1921
KN31	EARTH METAL FITTING	VNF1084

**■ SYOUT ASSY****OTHERS**

PC BOARD (SYOUT)	VNP1636
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**■ FLAUD ASSY****OTHERS**

PC BOARD (FLAUD)	VNP1637
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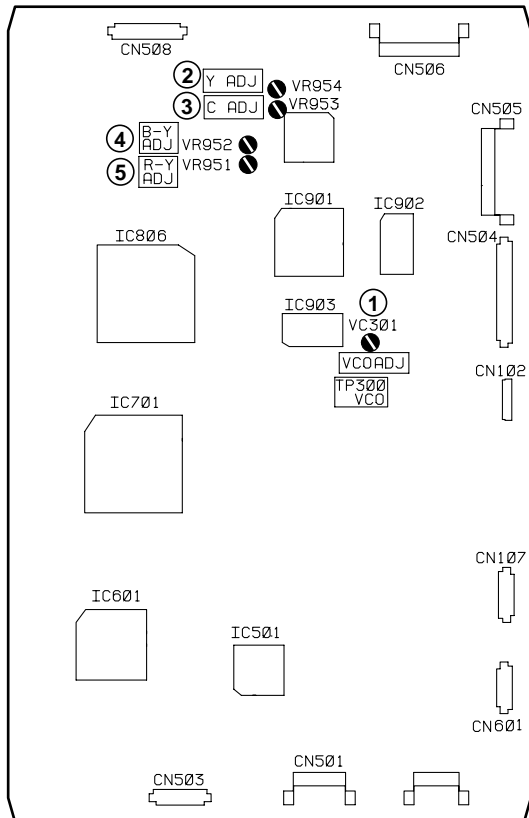
## 6. ADJUSTMENT

### 6.1 ADJUSTMENT ITEMS AND LOCATION

#### ■Adjustment Points (PCB Part)

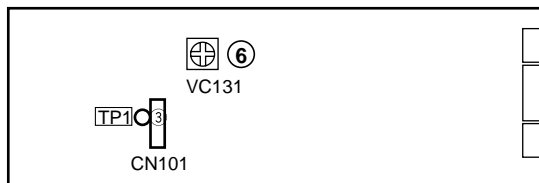
DVD MAIN ASSY

SIDE A



AUDIO ASSY

SIDE A



#### ■Adjustment Items

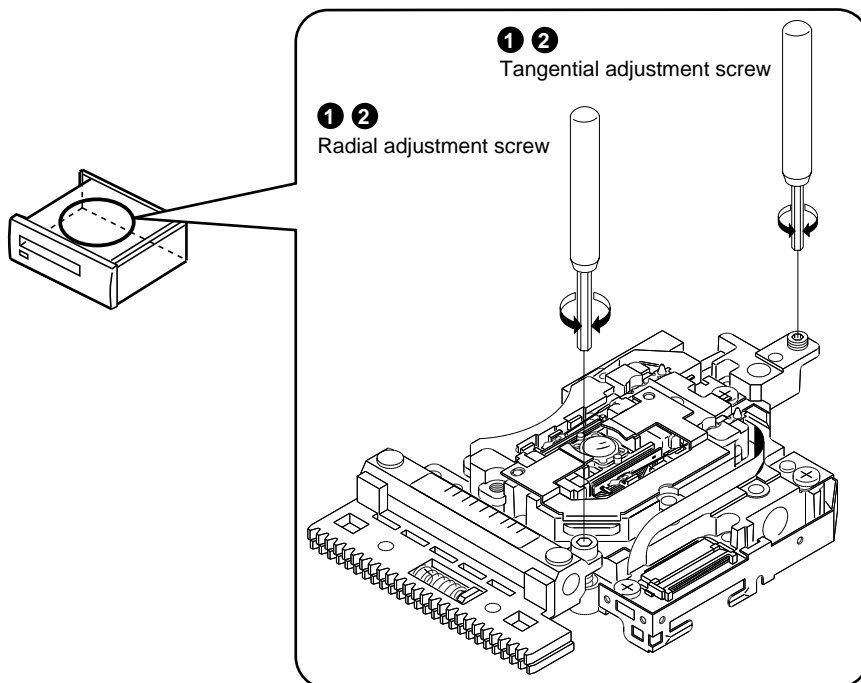
##### [Mechanical Part]

- ① Tangential Skew and Radial Skew Coarse Adjustment
- ② DVD Jitter Adjustment

##### [Electrical Part]

- ① VCO Offset Adjustment
- ② Y Level Adjustment
- ③ C Level Adjustment
- ④ Cb Level Adjustment
- ⑤ Cr Level Adjustment
- ⑥ 18MHz Master Clock Adjustment








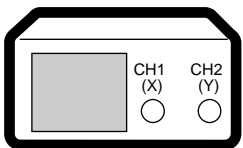

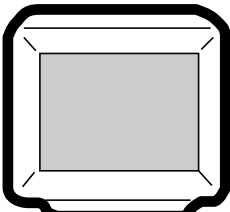
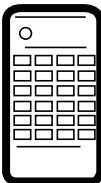


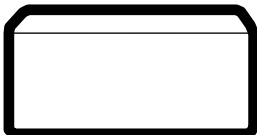
#### ■Adjustment Points (Mechanism Part)



Note 1:  
Remove the tray when adjusting  
the tangential and radial  
adjustment screws.

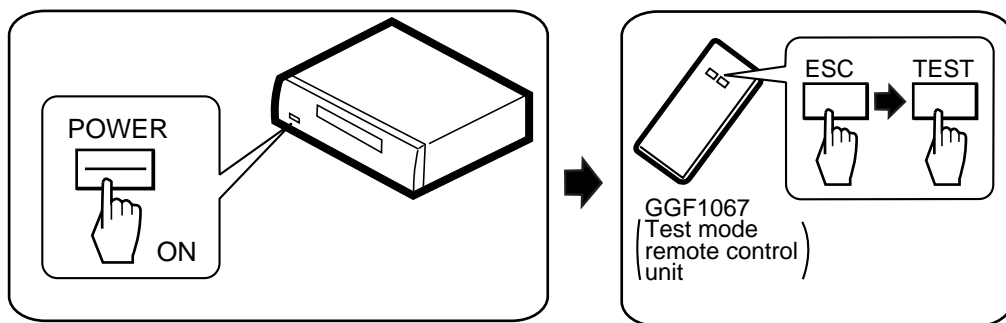
Note 2:  
After the adjustment, stabilize  
the screw with an adhesive.

## 6.2 JIGS AND MEASURING INSTRUMENTS

 <p>CD test disc (ABEX-784)</p>	 <p>DVD test disc (DVD-MJK1)</p>	 <p>⊖ Screwdriver (medium)</p>	 <p>⊖ Screwdriver (small)</p>
 <p>⊖ Precise screwdriver</p>	 <p>⊕ Screwdriver (large)</p>	 <p>⊕ Screwdriver (medium)</p>	 <p>Dual-trace oscilloscope (with delay) Frequency band <math>\geq 40\text{MHz}</math></p>
 <p>Frequency counter Display digit <math>\geq 8\text{-digit}</math></p>	 <p>TV monitor</p>	 <p>Test mode remote control unit (GGF1067)</p>	 <p>Hexagonal screwdriver</p>
 <p>Jitter Meter</p>	 <p>Equalizer Unit</p>		

## 6.3 TEST MODE

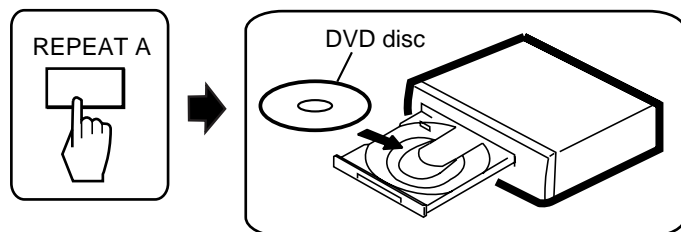
### TEST MODE: ON



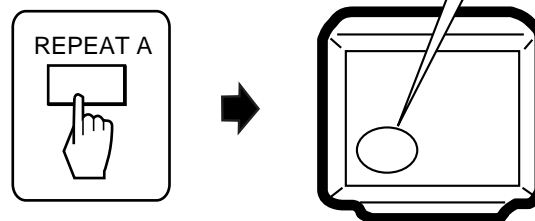
### TEST MODE: DISC SET

#### • With TRAY

#### <TRAY OPEN>

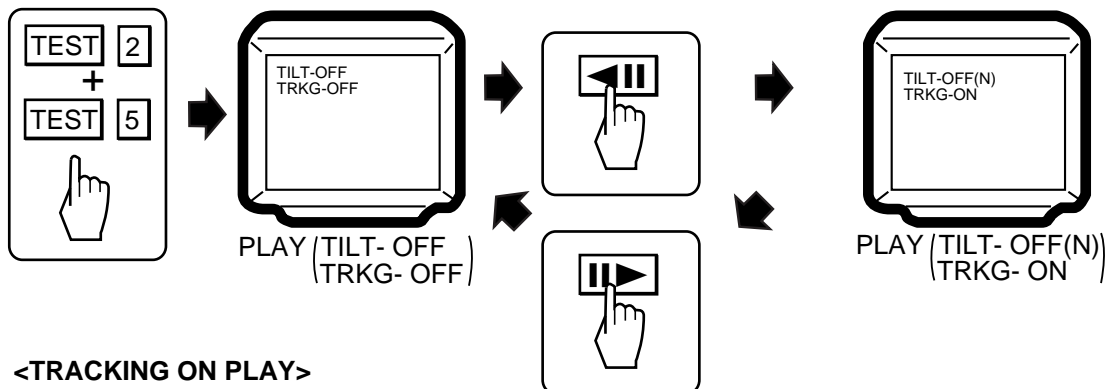


#### <TRAY CLOSE>

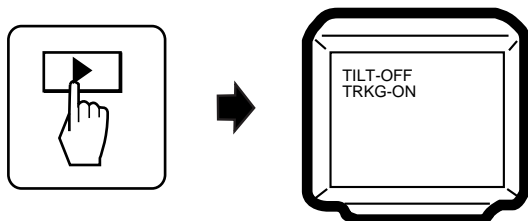


### TEST MODE: PLAY

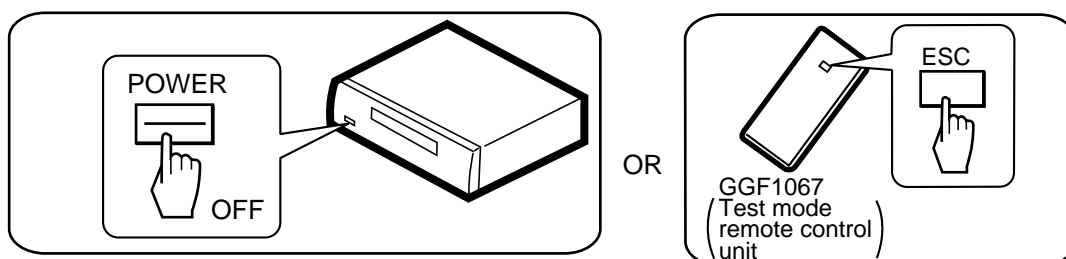
#### <TRACKING OFF PLAY>



#### <TRACKING ON PLAY>



### TEST MODE: OFF



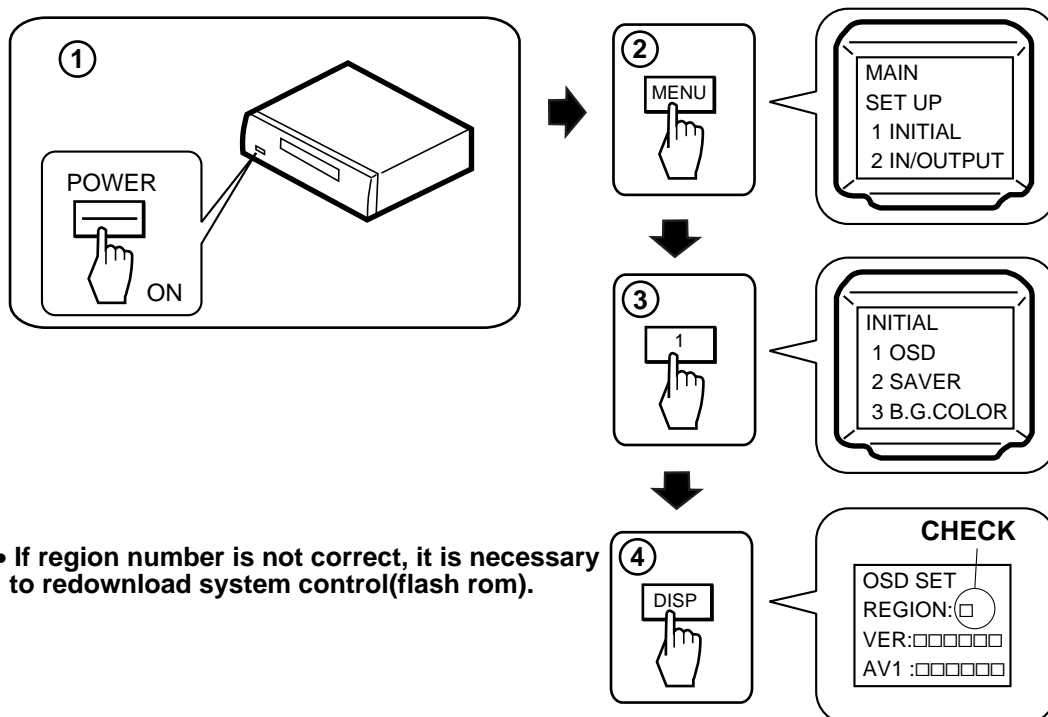


## 6.4 NECESSARY ADJUSTMENT POINTS

When	Adjustment Points
<b>■ EXCHANGE MECHANISM ASSY PARTS</b>	
Exchange pickup	<div>Mechanical point ①, ②</div> <div>Electric point</div>
Exchange spindle motor	<div>Mechanical point</div> <div>Electric point</div>
<b>■ EXCHANGE PCB ASSY</b>	
Exchange board DVD MAIN ASSY	<div>Mechanical point</div> <div>Electric point</div>
Note : ①, ②, ③, ④ and ⑤ are adjusted already.	
Exchange board AUDIO ASSY	<div>Mechanical point</div> <div>Electric point</div>
Note : ⑥ is adjusted already.	

## 6.5 REGION NUMBER CHECK

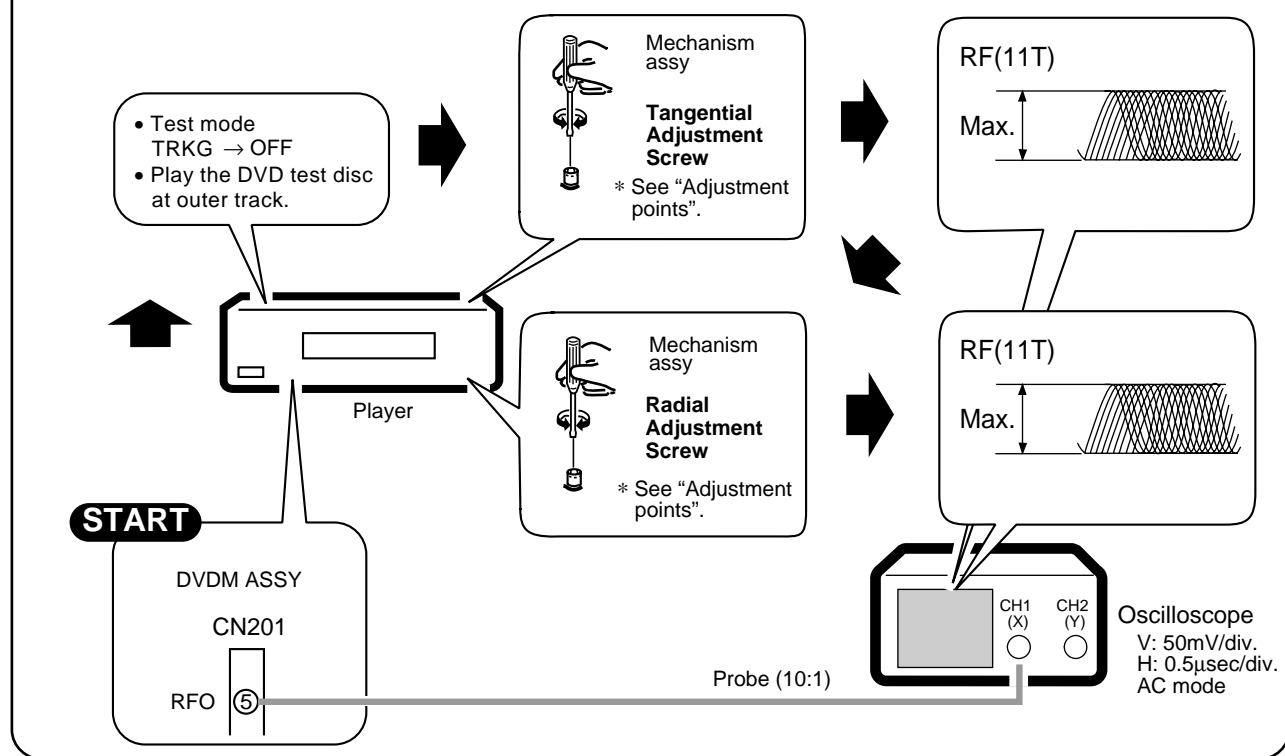
- Perform this operation after confirming the region number of each destination on the cover.



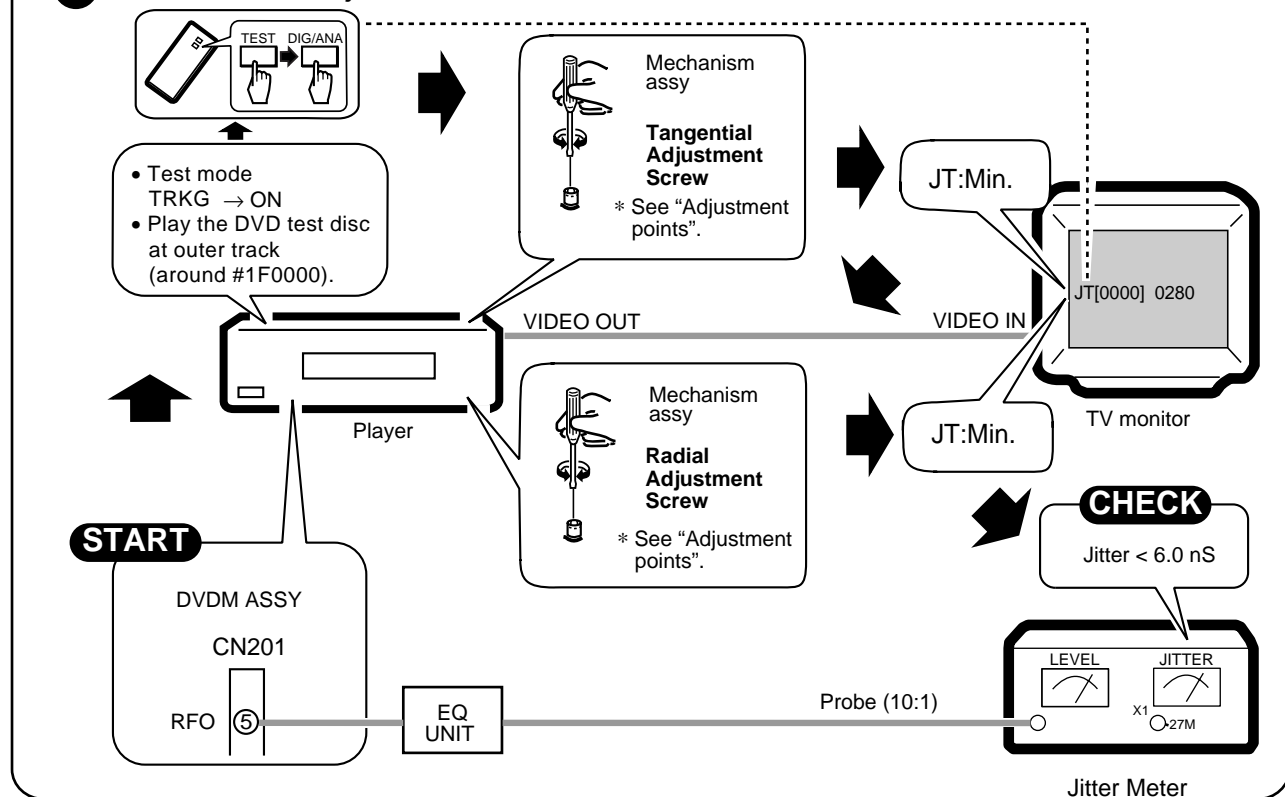
- If region number is not correct, it is necessary to redownload system control(flash rom).

## 6.6 MECHANICAL ADJUSTMENT

### 1 Tangential Skew and Radial Skew Coarse Adjustment

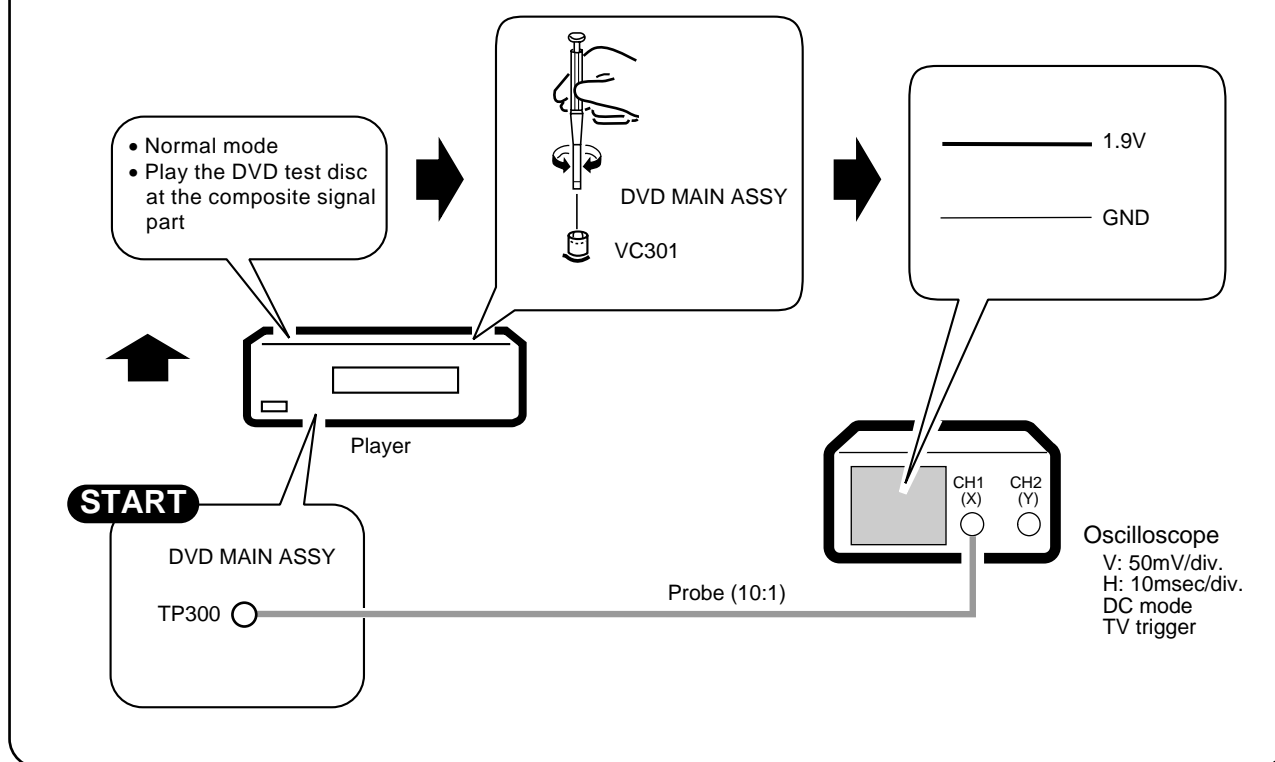


### 2 DVD Jitter Adjustment

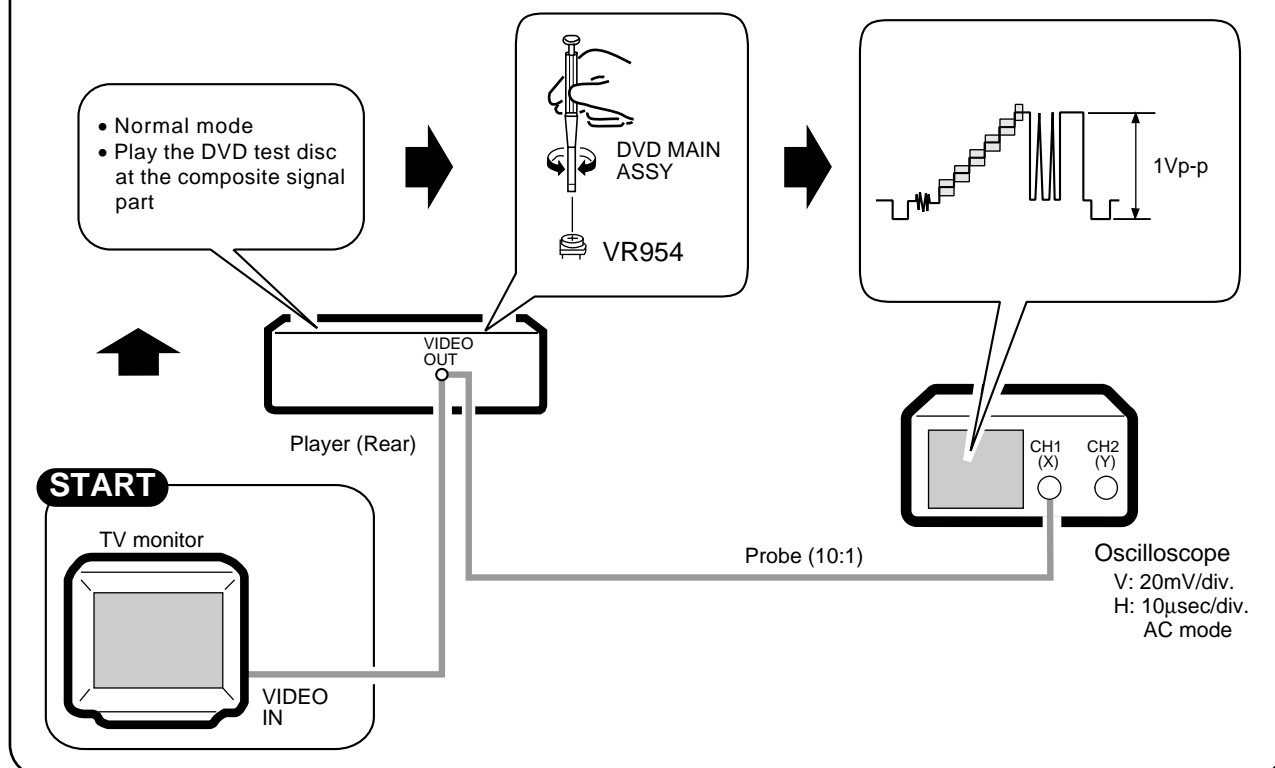


## 6.7 ELECTRICAL ADJUSTMENT

### ① VCO Offset Adjustment



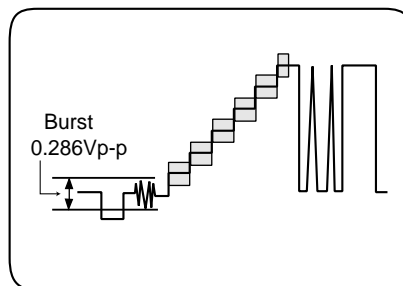
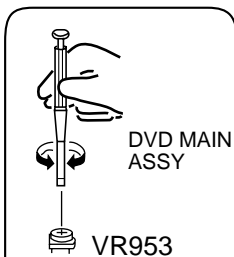
### ② Y Level Adjustment



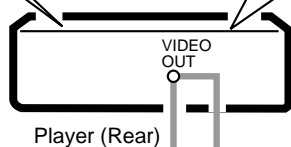
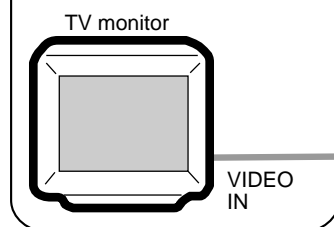
### ③ C Level Adjustment

NOTE: For DV-09, set the Black Level to DARK position on Video Setup menu by the MODE key.

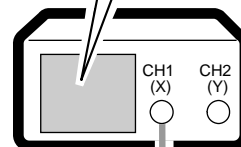
- Normal mode
- Play the DVD test disc at the composite signal part



**START**



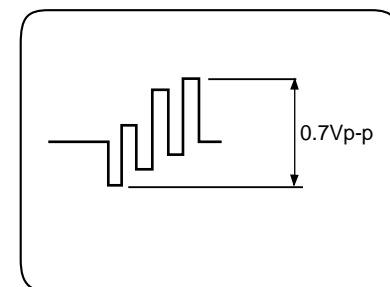
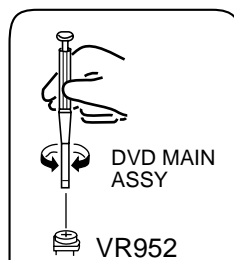
Probe (10:1)



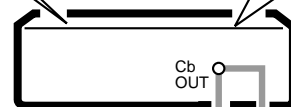
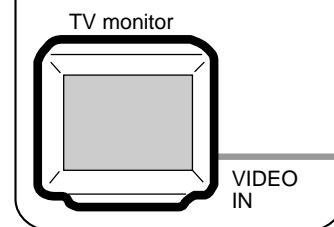
Oscilloscope  
V: 10mV/div.  
H: 10μsec/div.  
AC mode

### ④ Cb Level Adjustment

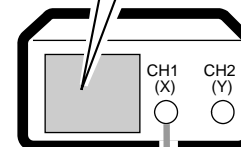
- Normal mode
- Play the DVD test disc at the 100% color-bar signal part



**START**

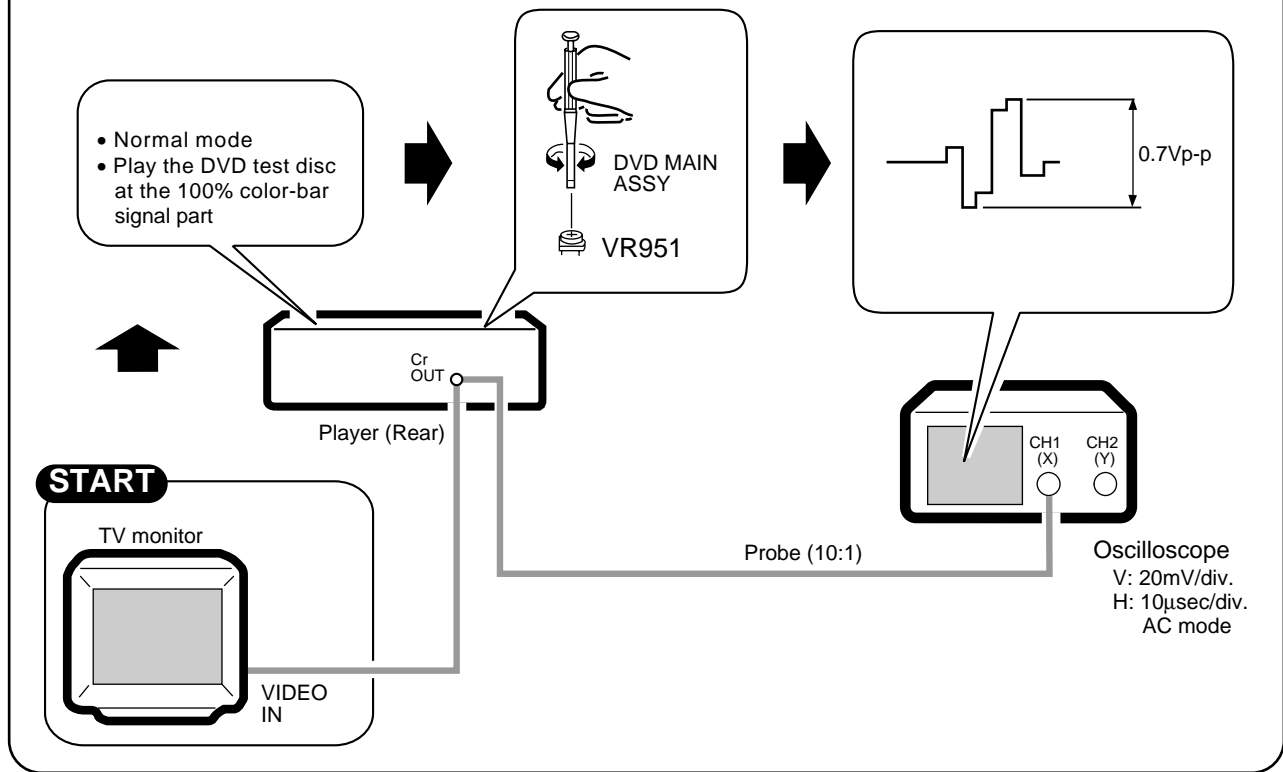


Probe (10:1)

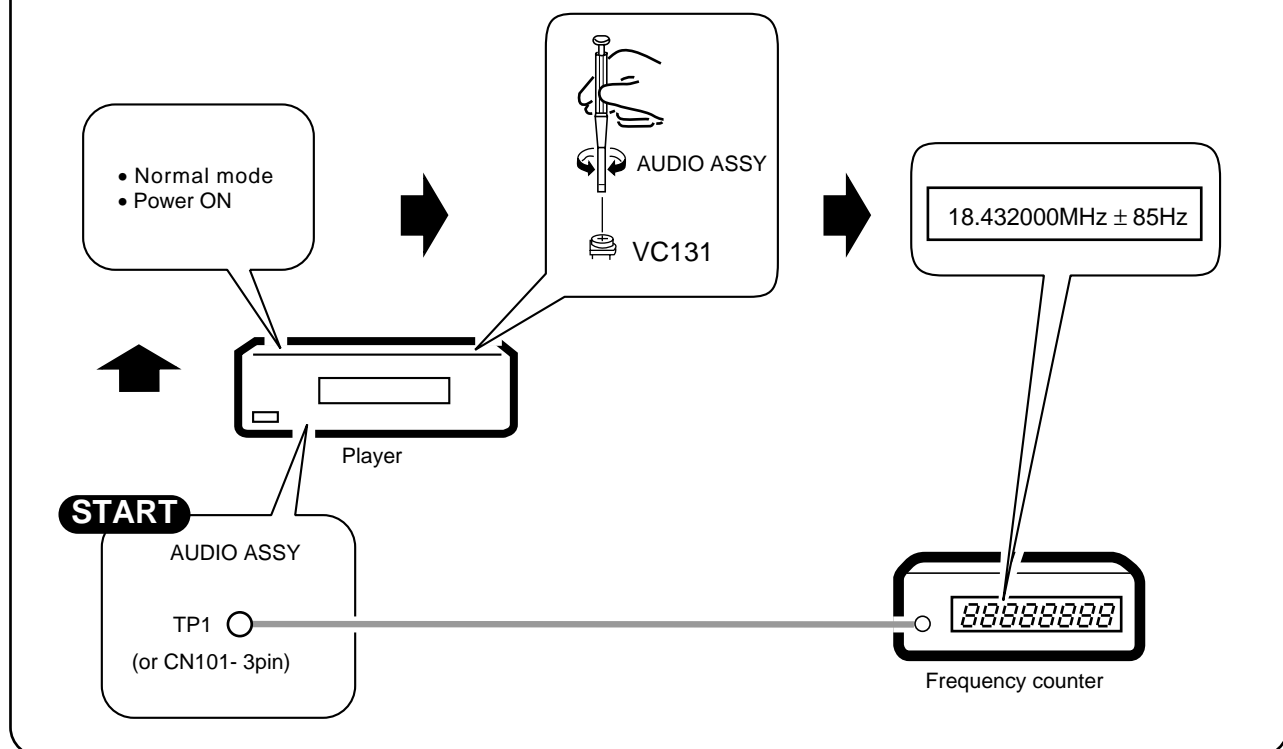


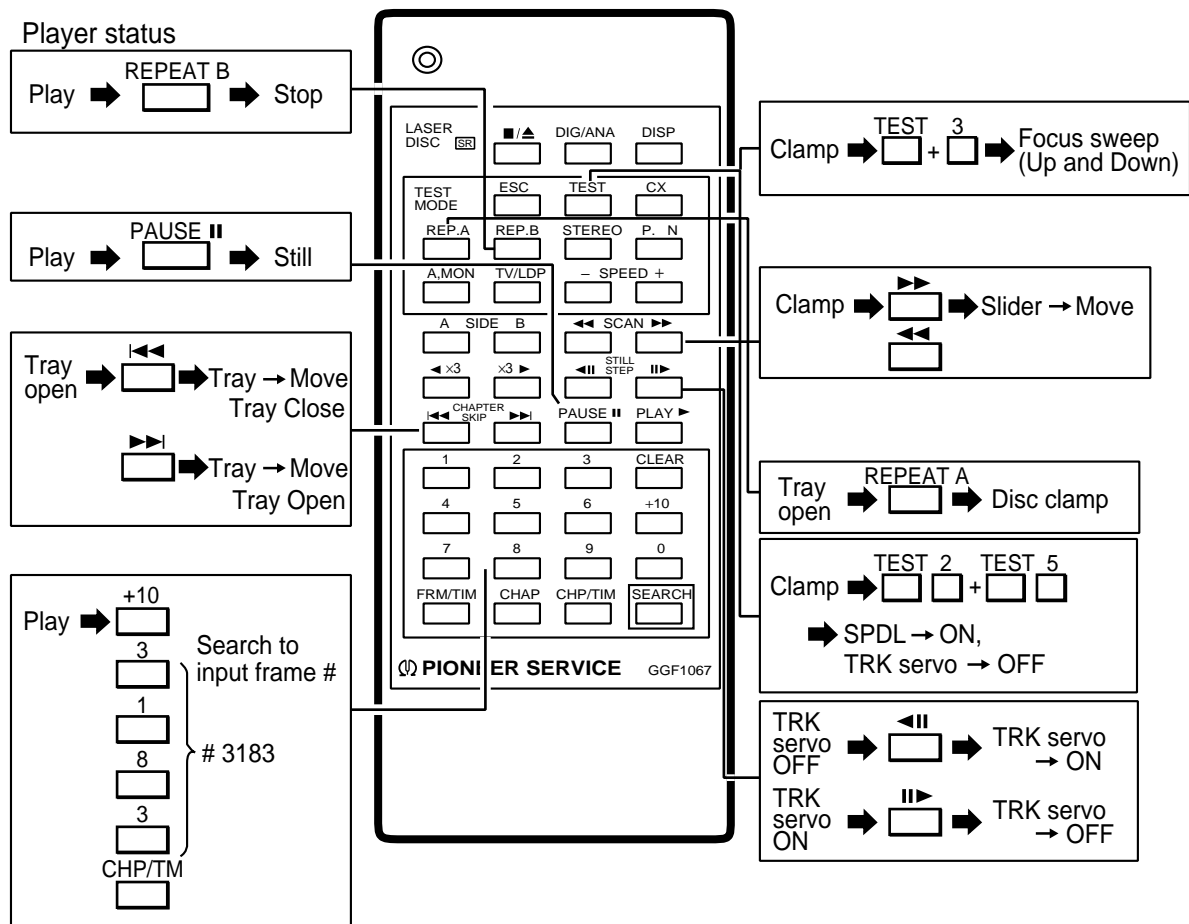
Oscilloscope  
V: 20mV/div.  
H: 10μsec/div.  
AC mode

## ⑤ Cr Level Adjustment



## ⑥ 18 MHz Master Clock Adjustment





Character in bold : Item name  
□: Information display

Address	□□□□□□□□	R-□□□□	K-□□	Remote control code
Tilt error value, Tilt servo status	T I L T - □ : □□□	M-□	Key code	
Tracking status	T R K G - □□□	S-□□□□	Mechanical position value	
Spindle status	S P D L - □□□	V-□□□□	Slider position	
AGC setting	A G C - □□□	AV1: □□□ F L S H : □□	Output video system	
		F : □□□/□□□ R E G : □	AV1 classification and Flash ROM size	
C1 error value of CD and DVD	E R - □□□□ □□□□	V : □□□□	Model type and Region setting for the player	
Internal operation mode of the mechanism control	M M - □□ : □□	S : □□□□□□/□□□□□□	Flash ROM version	
Disc judgment	D S C - □□□	M : □□□□□□/□□□□□□	System controller revision	
Pickup	P U - □□□	L : □□□□□□ A V : □□□	DVD mechanism controller revision	
			AV-1 chip version	

First screen display

CLD mechanism controller revision

Diagram illustrating the label on the front of the DVD-ROM case, showing fields and their corresponding descriptions:

- F** : □□□□ ← FL controller version
- GUI** : □□□ / □□□□□ ← GUI-ROM number and Part No. of GUI-ROM
- S** : □□□□□□ / □□□□□□ ← Part No. of flash ROM and system controller
- M** : □□□□□□ / ← Part No. of DVD mechanism controller
- L** : □□□□□□ ← Part No. of CLD mechanism controller

## 7. GENERAL INFORMATION

### 7.1 PARTS

#### 7.1.1 IC

- The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

#### ■ PD0259A (DVD MAIN ASSY : IC901)

##### • DNR IC

##### • Pin Function

No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function
1	GNDO	-	Ground pin for output	37	GNDO	-	Ground pin for output
2	VDDO	-	Power supply pin : 3.3V	38	VDDO	-	Power supply pin : 3.3V
3	VI [7]	I	Video data input: MSB	39	TIO [7]	I/O	Input/Output pin for test
4	VI [6]	I	Video data input	40	TIO [6]		
5	VI [5]			41	TIO [5]		
6	VI [4]			42	TIO [4]		
7	VI [3]			43	TIO [3]		
8	VI [2]			44	TIO [2]		
9	VI [1]			45	TIO [1]		
10	VI [0]	I	Video data input : LSB	46	TIO [0]		
11	GNDI	-	Ground pin for internal core input	47	GNDO	-	Ground pin for output
12	TSTMODE	I	Setting pin for test mode	48	CDATA [15]	I/O	DRAM data bus (for C signal) : MSB of CR
13	XHSYNCI	I	Horizontal synchronising signal input	49	CDATA [0]	I/O	DRAM data bus (for C signal) : LSB of CB
14	XVSYNCI	I	Vertical synchronising signal input	50	CDATA [14]	I/O	DRAM data bus (for C signal)
15	FIELDI	I	Field flag input Odd-Field : "L" Even-Field : "H"	51	CDATA [1]		
16	GNDI	-	Ground pin for internal core input	52	CDATA [13]		
17	CLK27I	I	27MHz clock input	53	CDATA [2]		
18	VDDI	-	Power supply pin for internal core input : 3.3V	54	VDDO	-	Power supply pin for output : 3.3V
19	GNDI	-	Ground pin for internal core input	55	GNDO	-	Ground pin for output
20	TI [1]	I	Intput pin for test	56	CDATA [12]	I/O	DRAM data bus (for C signal)
21	TI [0]			57	CDATA [3]		
22	RMA [3]	I	Resistor address input for monitor:MSB	58	CDATA [11]		
23	RMA [2]	I	Resistor address input for monitor	59	CDATA [4]		
24	RMA [1]			60	CDATA [10]		
25	RMA [0]	I	Resistor address input for monitor : LSB	61	VDDI	-	Power supply pin for internal core input : 3.3V
26	YNRMODE	I	H : only YNR mode / L : normal mode	62	GNDI	-	Ground pin for internal core input
27	SLMODE	I	Latch timing setting pin for V latch resistor	63	CDATA [5]	I/O	DRAM data bus (for C signal)
28	MODE_X	I	H:set normal setting to resistor forcedly L : normal (normal value "L")	64	CDATA [9]		
29	SRN	I	System reset input pin (negative)	65	CDATA [6]		
30	VDDI5	-	Power supply pin for input level shifter :5V	66	GNDO	-	Ground pin for output
31	GNDI	-	Ground pin for input level shifter	67	VDDO	-	Power supply pin for output : 3.3V
32	CSB	I	MPU Serial interface chip select input with 5V to 3.3V level shifter	68	CDATA [8]	I/O	DRAM data bus (for C signal) : LSB of CB
33	SCLK	I	MPU Serial interface clock input with 5V to 3.3V level shifter	69	CDATA [7]	I/O	DRAM data bus (for C signal) : MSB of CR
34	SDATA	I	MPU Serial interface data input with 5V to 3.3V level shifter	70	ADRS [4]	O	DRAM address signal output
35	VDDI	-	Power supply pin for input level shifter :3.3V	71	ADRS [3]		
36	GNDI5	-	Ground pin for input level shifter	72	ADRS [5]		

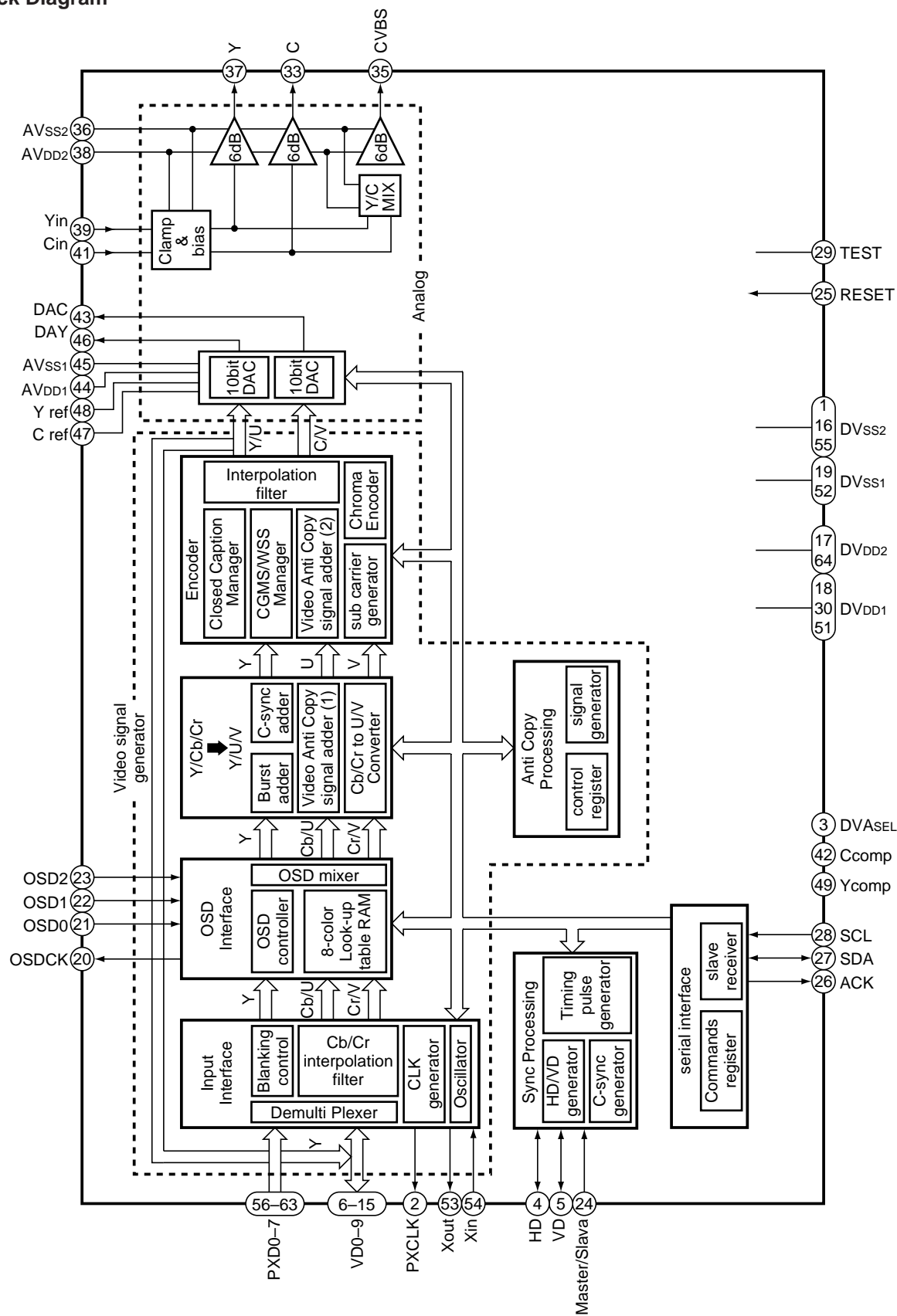


No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function
73	GNDO	-	Ground pin for output	109	GNDO	-	Ground pin for output
74	ADRS [2]	O	DRAM address signal output	110	FIELDO	I/O	Field flag output Output Odd-Field :L,Even-Field :H at the top of NTSC : LINE4, 266 /PAL:LINE1,313 for change timing .
75	ADRS [6]			111	XVSYNCO	I/O	Vertical synchronising signal output
76	ADRS [1]			112	XHSYNCO	I/O	Horizontal synchronising signal output
77	ADRS [7]			113	REBSELO	I/O	Cr flag output When output video data VO [7:0] is Cr and output next Y data ,output "H" . Otherwise "L"
78	ADRS [0]	O	DRAM address signal output : LSB of CB	114	VDDO	-	Power supply pin for output :3.3V
79	ADRS [8]	O	DRAM address signal output : MSB	115	GNDO	-	Ground pin for output
80	VDDO	-	Power supply pin : 3.3V	116	VO [0]	I/O	Video data output : LSB
81	GNDO	-	Ground pin for output	117	VO [1]	I/O	Video data output
82	RASB	O	DRAM row-address strobe signal output	118	VO [2]		
83	OEB	O	DRAM output-enable signal output	119	VO [3]		
84	WEB	O	DRAM write-enable signal output	120	VO [4]		
85	CASB	O	DRAM column-address strobe signal output	121	VO [5]		
86	GNDO	-	Ground pin for output	122	VO [6]		
87	YDATA [7]	I/O	DRAM data bus (for Y signal) : MSB of previous Y	123	VO [7]	I/O	Video data output : MSB
88	YDATA [8]	I/O	DRAM data bus (for Y signal) : LSB of current Y	124	GNDO	-	Ground pin for output
89	YDATA [6]	I/O	DRAM data bus (for Y signal)	125	TO1	O	Output pin for test
90	VDDI	-	Power supply pin for internal core input : 3.3V	126	VDDO	-	Power supply pin for output :3.3V
91	GNDI	-	Ground pin for internal core input	127	GNDO	-	Ground pin for output
92	YDATA [9]	I/O	DRAM data bus (for Y signal)	128	CLK27O	O	27MHz clock output
93	YDATA [5]			129	GNDO	-	Ground pin for output
94	YDATA [10]			130	TO0	I/O	Output pin for test
95	YDATA [4]			131	GNDO	-	Ground pin for output
96	YDATA [11]			132	VDDO	-	Power supply pin for output :3.3V
97	GNDO	-	Ground pin for output	133	XCSYNCO	I/O	Complex synchronising signal output
98	VDDO	-	Power supply pin for output : 3.3V	134	DXBLK	I/O	Blanking output
99	YDATA [3]	I/O	DRAM data bus (for Y signal)	135	DXBF	I/O	Burst flag output
100	YDATA [12]			136	GNDO	-	Ground pin for output
101	YDATA [2]			137	RMO [7]	I/O	Resistor monitor output
102	YDATA [13]			138	RMO [6]		
103	YDATA [1]			139	RMO [5]		
104	YDATA [14]			140	RMO [4]		
105	YDATA [0]	I/O	DRAM data bus (for Y signal) : LSB of previous Y	141	RMO [3]	I/O	Resistor monitor /serial-parallel conversion output
106	YDATA [15]	I/O	DRAM data bus (for Y signal) : MSB of current Y	142	RMO [2]	I/O	Resistor monitor /serial-parallel conversion output (ANR)
107	VDDI	-	Power supply pin for internal core input : 3.3V	143	RMO [1]	I/O	Resistor monitor /serial-parallel conversion output (CUP)
108	GNDI	-	Ground pin for internal core input	144	RMO [0]	I/O	Resistor monitor /serial-parallel conversion output (DEXT)

# M65677FP (DVD MAIN ASSY : IC951,IC952)

## • Digital Video Encoder

## • Block Diagram



## ● Pin Function

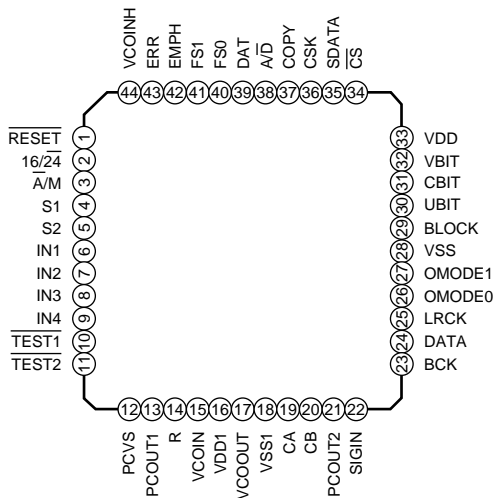
No.	Pin Name	I/O	Function
1	DVSS2	-	Ground pin for Digital (I/O part)
2	PXCLK	O	Reference clock for input Pixel data
3	DVASEL	I	I <sup>2</sup> C slave address setting When slave address=40h, set to "Low" . When slave address=42h, set to "High"
4	HD	I/O	Horizontal synchronising signal output Input when CCIR601 slave, output when master mode , CCIR656 mode and power on
5	VD	I/O	Vertical synchronising signal output Input when CCIR601 slave, output when master mode , CCIR656 mode and initial state
6	VD9	I/O	When Y/C output : "L" When Y/U/V : 10 bit digital intensity signal(MSB) with composite sync. Initial: "L"
7	VD8	I/O	When Y/C output : "L" When Y/U/V : 10 bit digital intensity signal(MSB) with composite sync Initial: "L"
8	VD7		
9	VD6		
10	VD5		
11	VD4		
12	VD3		
13	VD2		
14	VD1		
15	VD0	I/O	When Y/C output : "L" When Y/U/V : 10 bit digital intensity signal(LSB) with composite sync Initial: "L"
16	DVSS2	-	Ground pin for Digital (I/O part)
17	DVDD2	-	Power supply pin for digital (I/O part)
18	DVDD1	-	Power supply pin for digital (inner logic part)
19	DVSS2	-	Ground pin for Digital (inner logic part)
20	OSDCK	O	Reference clock for external connection microcomputer Output clock frequency is 13.5MHz or 6.25MHz. Exchanged output clock frequency by I2C bus.
21	OSD0	I	Color Look-up table address input MSB:OSD2 , LSB:OSD0. When not used OSD function, set all pins to "High"
22	OSD1		
23	OSD2		
24	Master/Slave	I	Synchronising mode setting Slave mode:"Low" , master mode:"High" , CCIR656 mode:"Low"
25	RESET	I	Initialise reset (active"Low")
26	ACK	O	Serial bus acknowledge output (received acknowledge:"High")
27	SDA	I/O	Serial bus data acknowledge pin
28	SCL	I	Serial bus clock input
29	TEST	I	For test
30	DVDD1	-	Power supply pin for digital (inner logic part)
31	N.C.	-	Not used (open)
32	N.C.		
33	C	O	Chroma signal output from 6dB amplifier. When 6dB amplifier input signal amplitude is 0.5Vp-p, chroma output standard amplitude is 1.0Vp-p.
34	N.C.	-	Not used (open)

No.	Pin Name	I/O	Function
35	CVBS	O	Analog composite video signal output from 6dB amplifier. Analog composite video standard amplitude is 1.24Vp-p.
36	AVSS2	-	Ground pin for analog (6dB amplifier part)
37	Y	O	Luminance signal(Y) input from 6dB amplifier. When 6dB amplifier input signal amplitude is 0.6Vp-p, luminance signal(Y) standard amplitude is 1.2Vp-p.
38	AVDD2	-	Power supply pin for analog (6dB amplifier part)
39	Yin	I	Luminance signal(Y) input from external LPF. Luminance signal(Y) standard amplitude is 0.6Vp-p.
40	N.C.	-	Not used (open)
41	Cin	I	Chroma signal(Y) input from external LPF. Chroma signal(Y) standard amplitude is 0.5Vp-p.
42	Ccomp	I	Phase compensation of DAC for chroma/V signal output
43	DAC	O	Chroma/V signal output
44	AVDD1	-	Power supply pin for analog (DAC part)
45	AVSS1	-	Ground pin for analog (DAC part)
46	DAY	O	Y/U signal output
47	Cref	I	Reference current of DAC for chroma/V signal output
48	Yref	I	Reference current of DAC for Y/U signal output
49	Ycomp	I	Phase compensation of DAC for Y/U signal output
50	N.C.	-	Not used (open)
51	DVDD1	-	Power supply pin for digital (inner logic part)
52	DVSS1	-	Ground pin for digital (inner logic part)
53	Xout	O	System clock output
54	Xin	I	System clock input (System clock frequency is 27.0MHz only)
55	DVSS2	-	Ground pin for digital (I/O part)
56	PXD7	I	PIXEL data (MSB bit)
57	PXD6	I	PIXEL data
58	PXD5		
59	PXD4		
60	PXD3		
61	PXD2		
62	PXD1		
63	PXD0	I	PIXEL data (LSB bit)
64	DVDD2	-	Power supply pin for digital (I/O part)

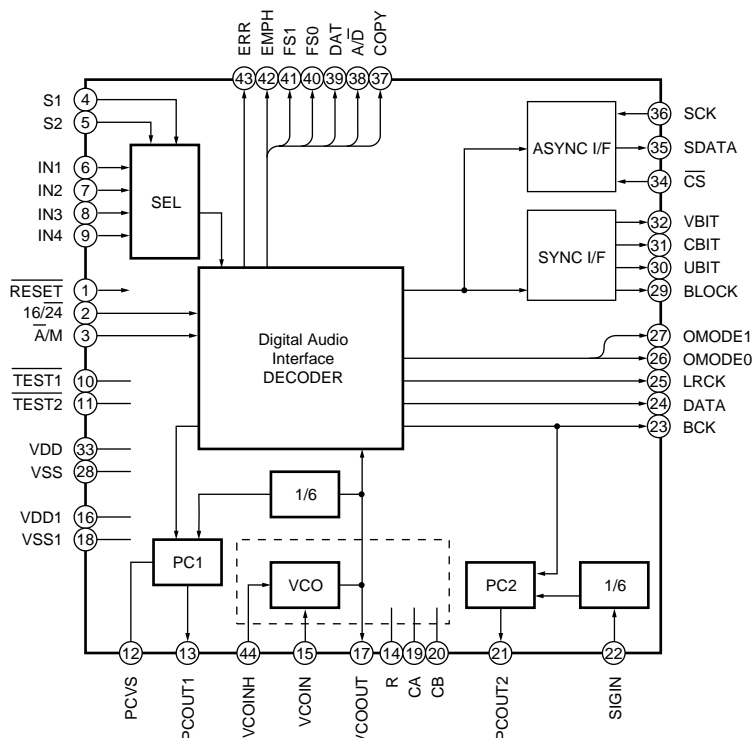
## CD0015AF (DIRB ASSY : IC861)

### • DIR

### • Pin Layout



### • Block Diagram



### • Pin Function

No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function
1	RESET	IS	Power ON reset input ("L": reset)	23	BCK	O	Demodulation data bit clock output (64fs)
2	16/24	IT	Input format select pin with pull up resistor	24	DATA	O	Demodulated audio data output
3	A/M	IT	Input format select pin with pull up resistor	25	LRCK	O	Demodulation data LR clock output ("H":L)
4	S1	IT	Input select pin 1	26	OMODE0	O	Data output format select pin 0
5	S2	IT	Input select pin 2	27	OMODE1	O	Data output format select pin 1
6	IN1	IT	Data input pin 1	28	VSS	-	Ground pin for logic part
7	IN2	IT	Data input pin 2	29	BLOCK	O	Block start output pin
8	IN3	IT	Data input pin 3	30	UBIT	O	User data output pin
9	IN4	IT	Data input pin 4	31	CBIT	O	Channel status output pin
10	TEST1	IT	Pin 1 for test (normal:"H" or open)	32	VBIT	O	Veriditiy output pin
11	TEST2	IT	Pin 2 for test (normal:"H" or open)	33	VDD	-	Power supply pin for logic part
12	PCVS	-	Input for VCO free run frequency setting	34	CS	IT	Chip select input pin ("L":selected)
13	PCOUT1	-	Phase comparator output 1	35	SDATA	OT	Serial data output pin
14	R	-	Pin connected to resistor for VCO adjustment	36	SCK	IT	Serial clock input pin
15	VCOIN	-	VCO control voltage input	37	COPY	O	Inhibit copy information output pin
16	VDD1	-	Power supply pin for VCO part	38	A/D	O	Audio/degital data information output pin
17	VCOOUT	-	VCO output (384fs)	39	DAT	O	DAT information output pin
18	VSS1	-	Ground pin for VCO part	40	FS0	O	Sampling frequency information output pin 0
19	CA	-	Pin connected to capacitor for VCO adjustment	41	FS1	O	Sampling frequency information output pin 1
20	CB	-	Pin connected to capacitor for VCO adjustment	42	EMPH	O	Emphasis information output pin
21	PCOUT2	-	Phase comparator output 2	43	ERR	O	Unreaded data information output pin
22	SIGIN	IT	External VCO input pin	44	VCOINH	IT	Input pin for inner VCO osilation stop("H":stop)

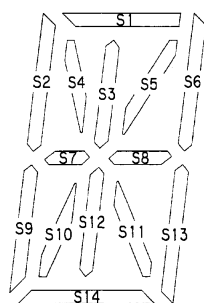
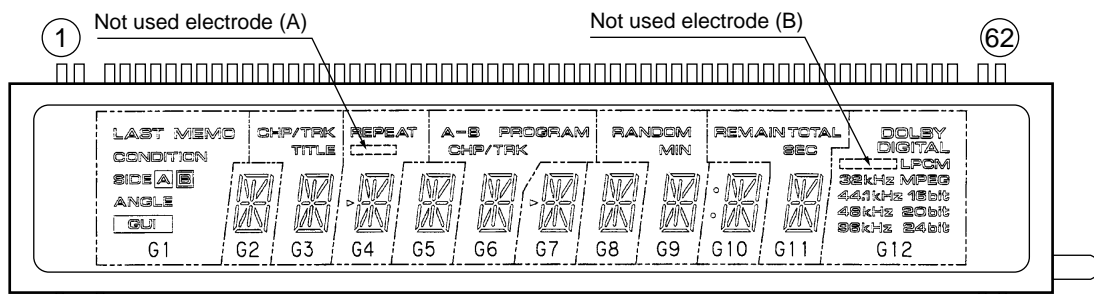
IS:shumitt triger input pin IT:TTL level input pin , O:CMOS level output pin , OT:CMOS level tri-state output pin

## 7.1.2 DISPLAY

## ■ VAW1047 (FLKB ASSY : V401)

## ● FL TUBE

## ● GRID ASSIGNMENT



G2~G11

## ● ANODE AND GRID ASSIGNMENT

	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
S1		S1	S1	S1	S1	S1	S1	S1	S1	S1	S1	
S2		S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	
S3		S3	S3	S3	S3	S3	S3	S3	S3	S3	S3	
S4		S4	S4	S4	S4	S4	S4	S4	S4	S4	S4	*2
S5		S5	S5	S5	S5	S5	S5	S5	S5	S5	S5	DOLBY DIGITAL
S6	LAST MEMO	S6	S6	S6	S6	S6	S6	S6	S6	S6	S6	32kHz
S7		S7	S7	S7	S7	S7	S7	S7	S7	S7	S7	LPCM
S8	CONDITON	S8	S8	S8	S8	S8	S8	S8	S8	S8	S8	MPEG
S9	[B]	S9	S9	S9	S9	S9	S9	S9	S9	S9	S9	44.1kHz
S10		S10	S10	S10	S10	S10	S10	S10	S10	S10	S10	16bit
S11	[A]	S11	S11	S11	S11	S11	S11	S11	S11	S11	S11	48kHz
S12	SIDE	S12	S12	S12	S12	S12	S12	S12	S12	S12	S12	20bit
S13	ANGLE	S13	S13	S13	S13	S13	S13	S13	S13	S13	S13	96kHz
S14	[GUI]	S14	S14	S14	S14	S14	S14	S14	S14	S14	S14	24bit
S15			CHP/TRK	REPEAT		A						
S16						PROGRAM			RANDOM		TOTAL	
S17						-B					REMAIN	
S18				▷			▷			◦		
S19			TITLE	*1		CHP/TRK			MIN		SEC	

\*1:Not used electrode (A)

\*2:Not used electrode (B)

## ● PIN ASSIGNMENT

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14~23	24	25	26	27	28	29	30
Assignment	F1	F1	NP	NL	S19	S18	S17	S16	S15	S14	S13	S12	S11	NL	S10	S9	S8	S7	S6	S5	S4

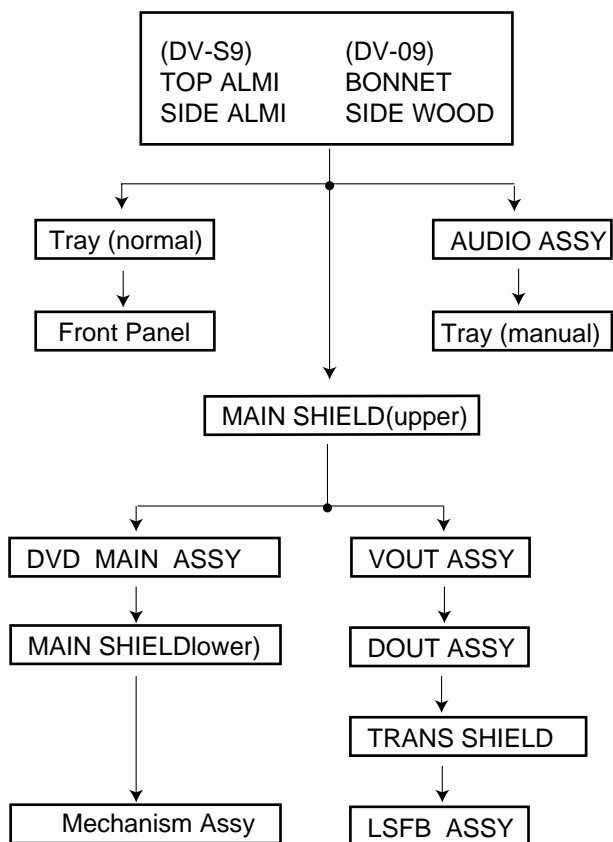
  

Pin No.	31	32	33	34	35	36	37	38	39~51	52	53	54	55	56	57	58	59	60	61	62
Assignment	S3	S2	S1	G12	G11	G10	G9	G8	NL	G7	G6	G5	G4	G3	G2	G1	NL	NP	F2	F2

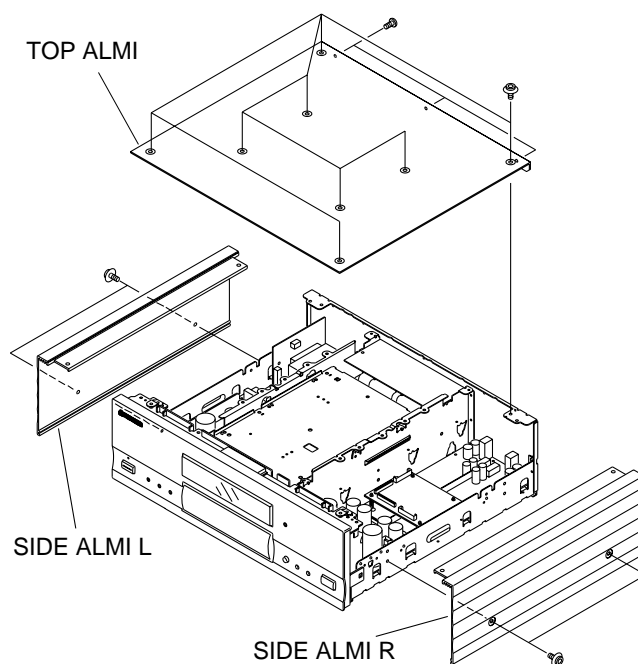
F1,F2:Filament G1~G12:Grid S1~S19:Anode NP:No Pin NL:No Lead

## 7.2 DISASSEMBLY

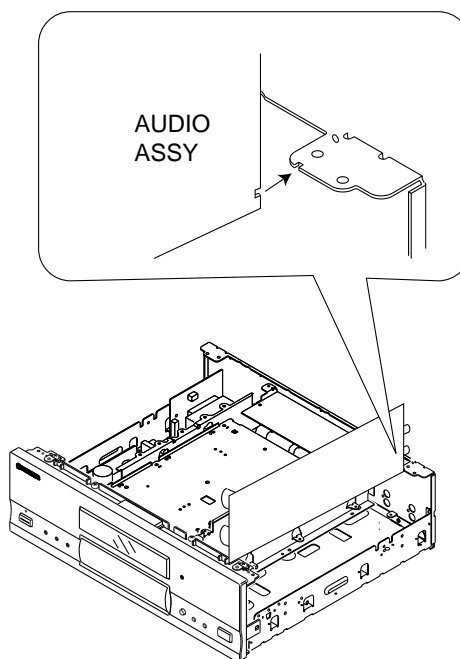
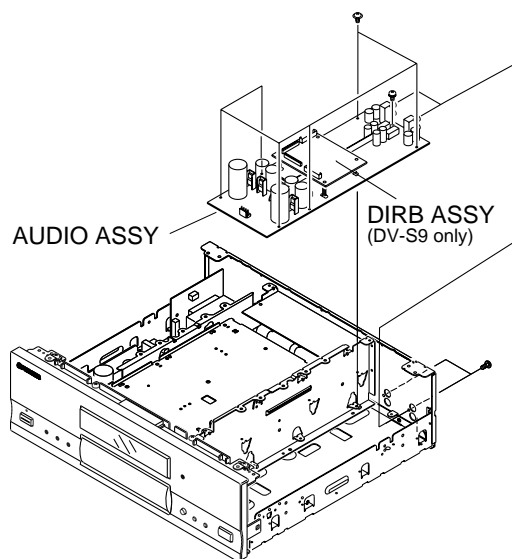
### ■ Flowchart



### ■ Exterior (DV-S9)



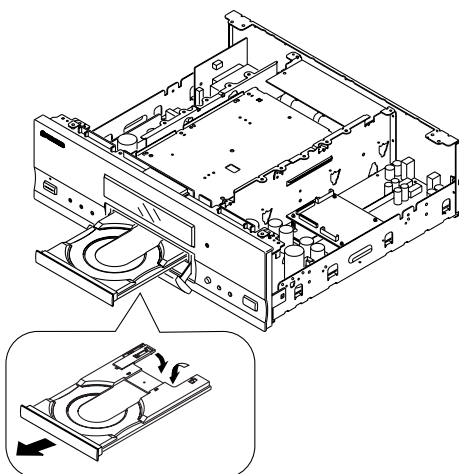
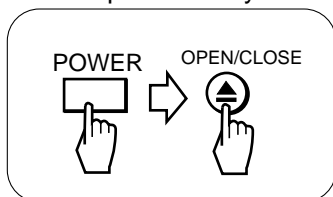
### ■ AUDIO ASSY, DIRB ASSY



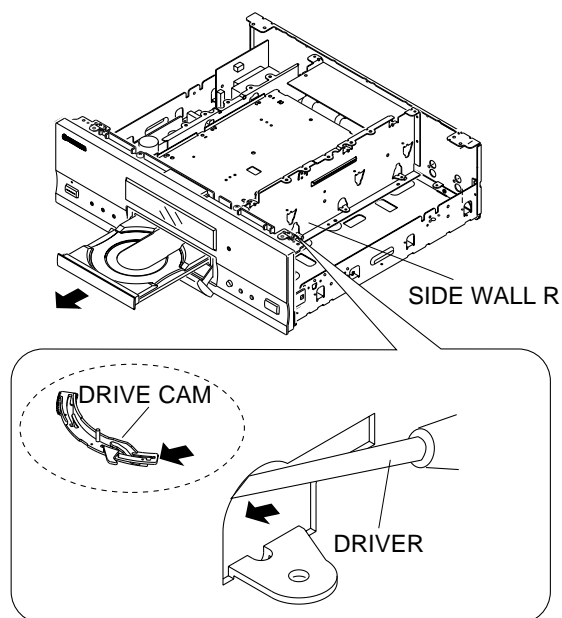


## ■ Tray(normal)

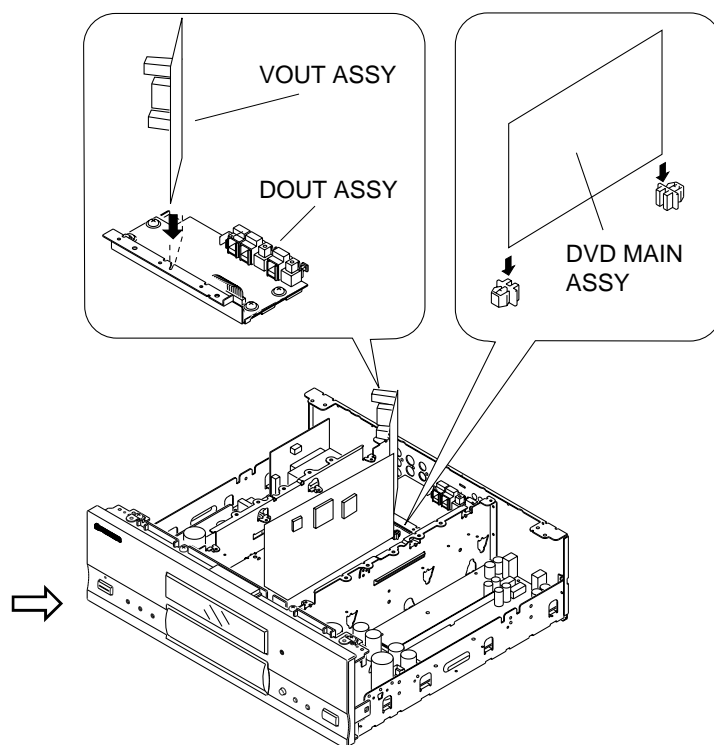
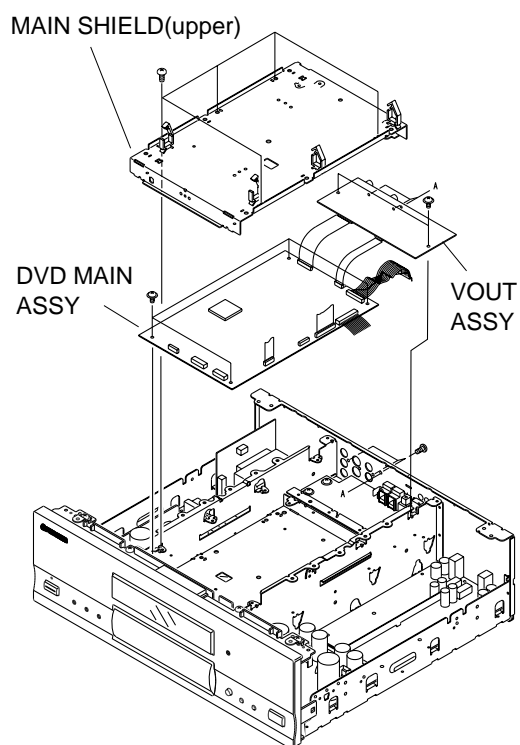
Open the Tray



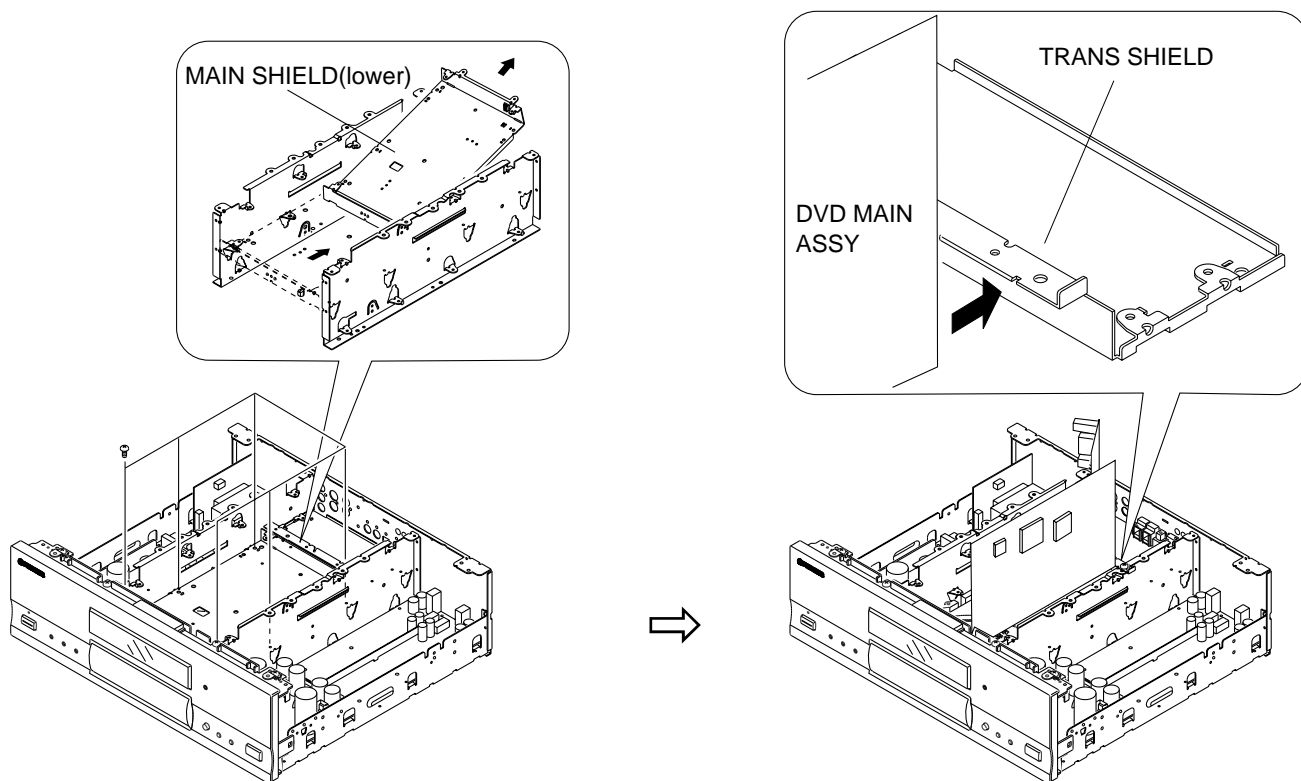
## ■ Tray(manual)



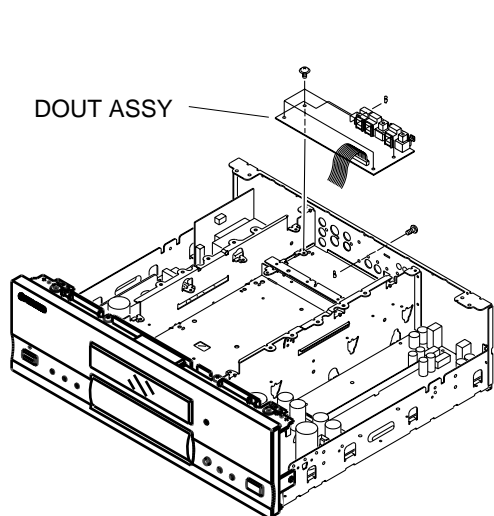
## ■ DVD MAIN ASSY,VOUT ASSY



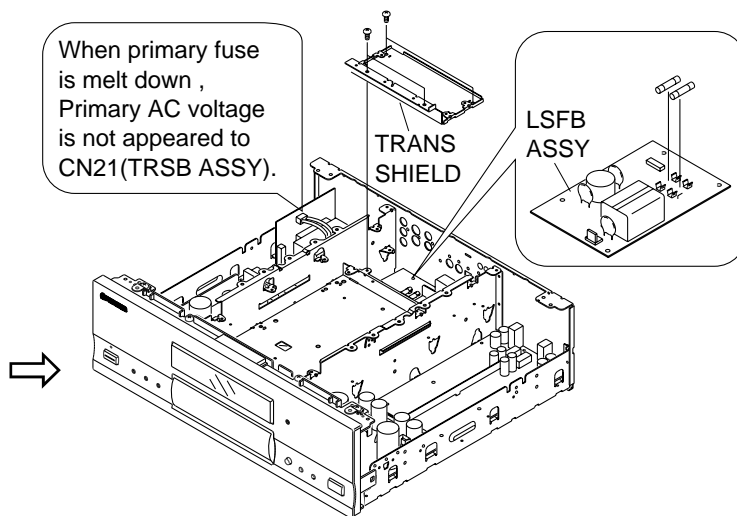
## ■ MAIN SHIELD(Lower)



## ■ DOUT ASSY



## ■ Primary Fuse



## ■ Loading Mechanism Assy

Remove the tray panel after the tray opened.



Hold the DVD MAIN Assy on the MAIN SHIELD(lower).



Turn the short SW to ON position(outside)



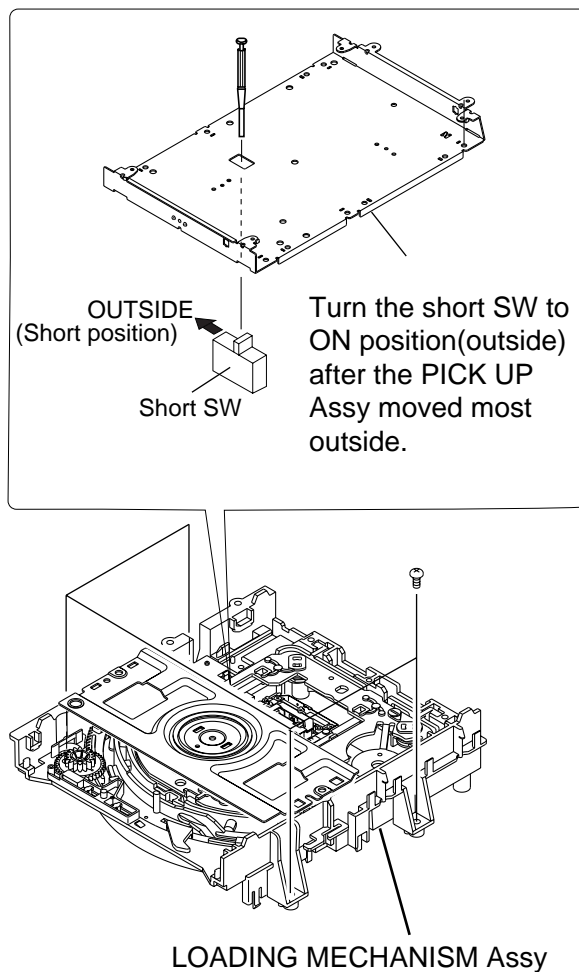
Remove the DVD MAIN Assy .



Remove the MAIN SHIELD(lower).



Remove the Mechanism Assy after the tray closed.

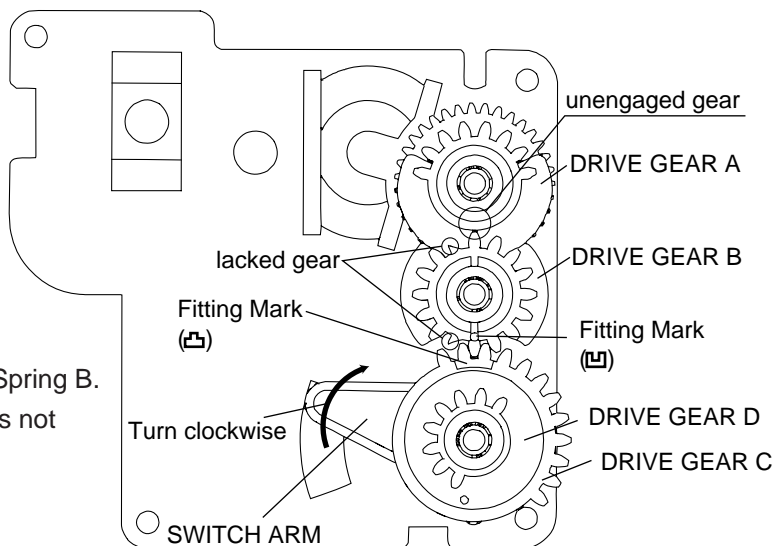


## ■ Assemble DOOR SUPPORT ASSY

1. Set the Gear Box to the Front Panel with condition like a indicated figure.
2. Set the door support block to the Front Panel with the Door Support opened most outside.

### NOTE:

- If it is hard to assemble, remove the Door Spring B.
- It is necessary to set precisely, if the gear is not engaged, the tray will touch the door .

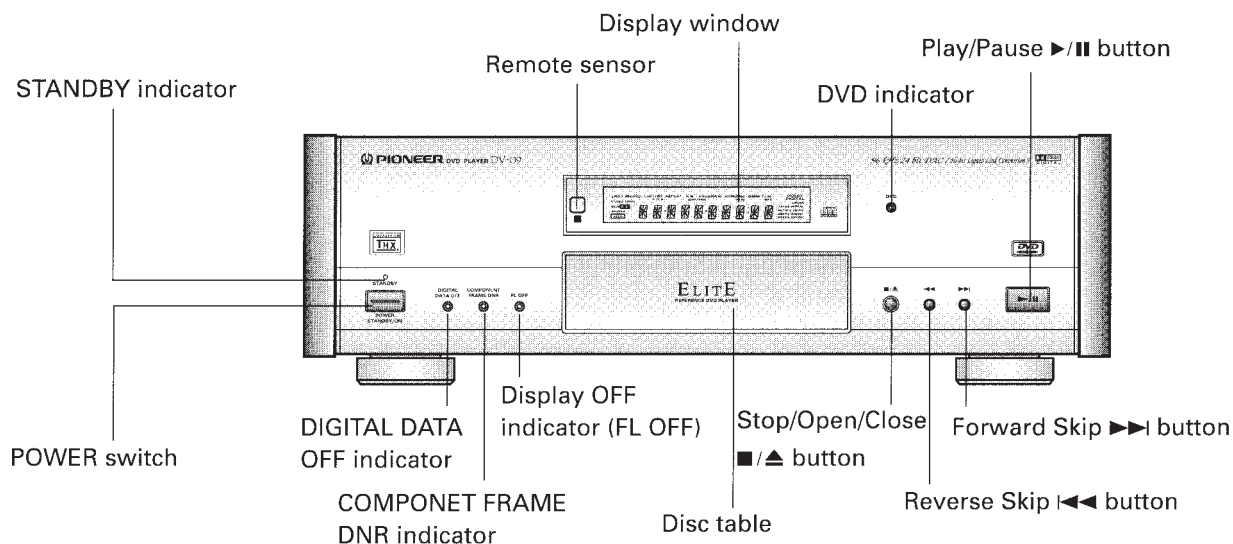




## 8. PANEL FACILITIES AND SPECIFICATIONS

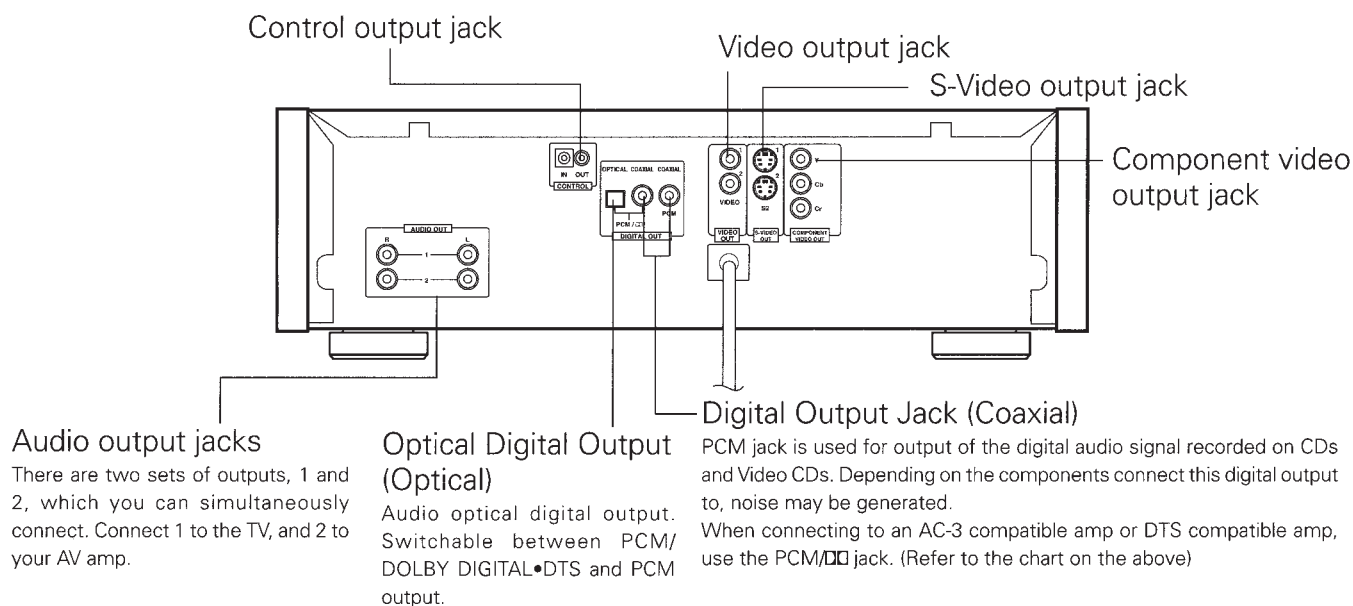
### 8.1 PANEL FACILITIES

#### ■ FRONT PANEL



#### ■ REAR PANEL

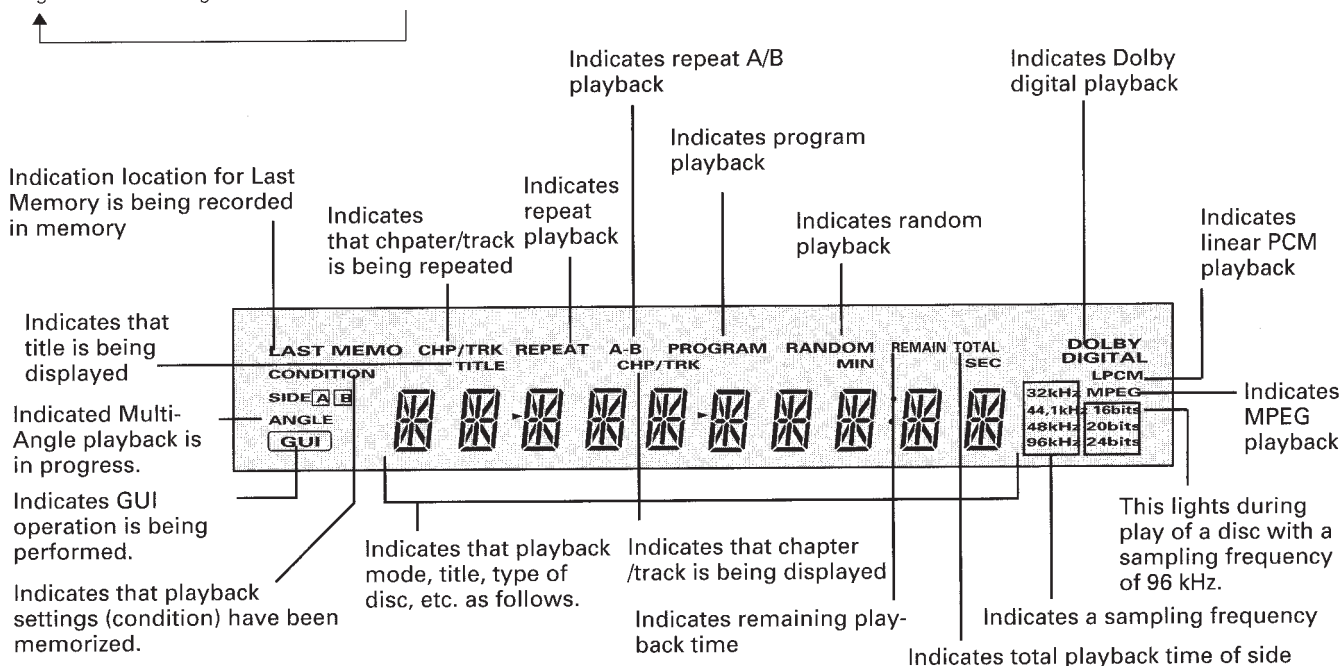
Your amp	Regular AV amp	Coaxial	Connect to the coaxial jack, and select PCM from the menu.
		Optical	Connect to the optical jack, and select PCM from the menu.
	AC-3 compatible amp	Coaxial	Connect to the PCM/  jack, and select PCM/DOLBY DIGITAL•DTS from the menu.
		Optical	Connect to the optical jack, and select PCM/DOLBY DIGITAL•DTS from the menu.
	DTS compatible amp	Coaxial	Connect to the coaxial jack, and select PCM/DOLBY DIGITAL•DTS from the menu.
		Optical	Connect to the optical jack, and select PCM/DOLBY DIGITAL•DTS from the menu.



## ■ DISPLAY WINDOW

When the remote control's FL DIMMER button is pressed, the brightness of the display window will change as follows.

Bright → Not so bright → Dim → OFF

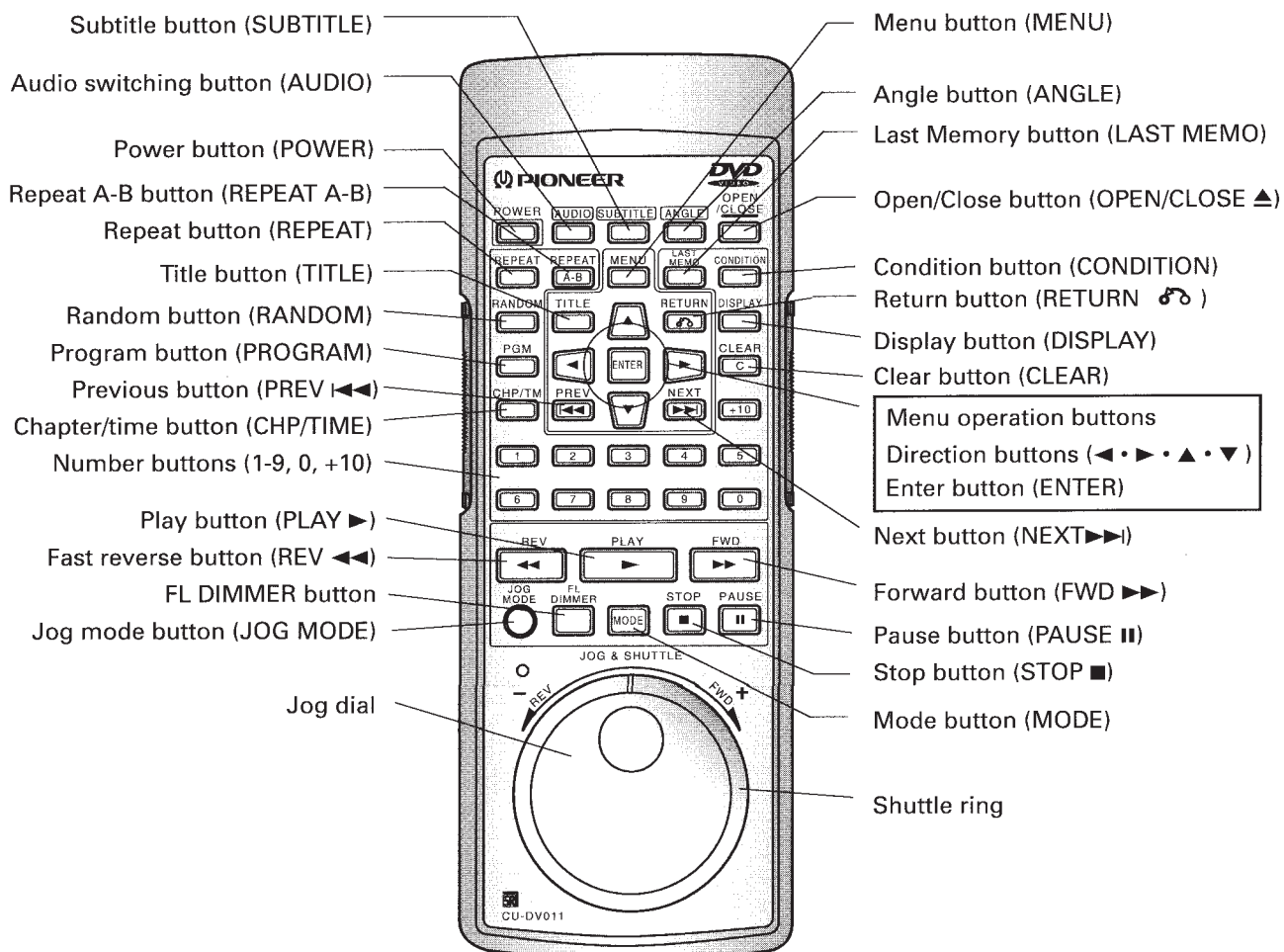


## Sample Display

C D	:Compact disc	M E N U	:Menu mode
D V D	:DVD	T I T L E	:Title menu
V C D	:Video CD	S E T U P	:Set-up menu
P B C P L A Y	:Playback control playback on Video CD	C O N D _ M E M	:Condition memory
O P E N	:Disc table is opening or is open	L A S T _ M E M	:Last memory
C L O S E	:Disc table is closing		
P L A Y	:Playback		
S T O P	:Stop		
- O F F -	:Power is turned off		



## ■ REMOTE CONTROL



**(FOR DV-09)**

## General

System .....	DVD system, Video CD and Compact Disc digital audio system
Laser .....	Semiconductor laser: wavelength 650 nm
Power requirements: .....	AC 120 V, 60 Hz
Power consumption .....	52 W
Weight .....	15.8 kg (34 lb 13 oz)
Dimensions .....	460 (W) x 370 (D) x 144 (H) mm (18 1/8 x 14 9/16 x 5 11/16 in.) (Not including protruding cables, etc.)
Operating temperature .....	+5°C to +35°C (+36°F to +96°F)
Operating humidity .....	5% to 85% (no condensation)

### S-Video Output (2 pairs)

Y (luminance) - Output level .....	1 Vp-p (75Ω)
C (color) - Output level .....	286 mVp-p (75Ω)
Jacks .....	S-VIDEO jack

### Video Output (2 pairs)

Output level ..... 1 Vp-p (75Ω synchronous negative)  
Jacks ..... RCA

## Component Video Output

Output level ..... Y:1 Vp-p (75Ω synchronous negative)  
C (color) - Output level ..... Cb,Cr: 0.7 Vp-p (75Ω)  
Jacks ..... RCA jacks



### Audio Output (2 pairs)

Output level	
During audio output .....	200 mVrms (1 kHz, -20 dB)
Number of channels .....	2
Jacks .....	RCA

## Digital audio characteristics

Frequency response	4 Hz to 44 kHz (DVD fs: 96 kHz) 4 Hz to 22 kHz (DVD fs: 48 kHz) 4 Hz to 20 kHz (CD)
S/N ratio	115 dB (EIAJ)
Dynamic range	108 dB (EIAJ)
Total harmonic distortion	0.002 %
Wow and flutter	Limit of measurement (±0.001 % W. PEAK) or lower (EIAJ)

## Other Terminals

Optical digital output (PCM/  /DTS) ..... Optical digital jack  
Coaxial digital output (PCM/  /DTS) ..... RCA jack  
Coaxial digital output (PCM) ..... RCA jack  
CONTROL IN /OUT ..... MiniJack (3.5ø)

## Accessories

Remote control unit .....	1
AAA (R03) dry cell batteries .....	2
Audio cord .....	1
Video cord .....	1
Operating Instructions .....	1
Warranty card (Region number ① only) .....	1

**NOTE:**

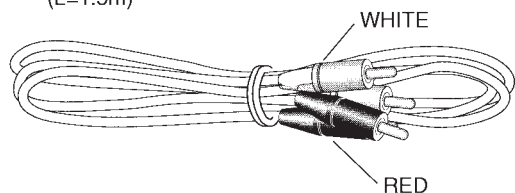
*The specifications and design of this product are subject to change without notice, due to improvement.*

"Dolby, Digital (AC-3)" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

## ■ Accessories

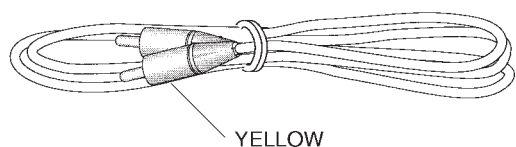
## Audio cord

VDE1023  
(L=1.5m)

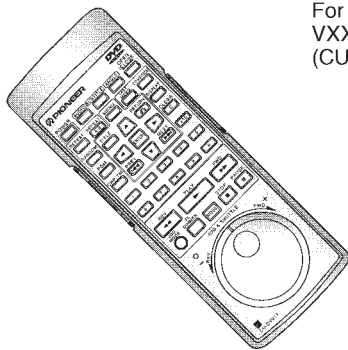


## Video cord

VDE1024  
(L=1.5m)



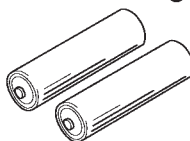
### Remote control unit



For DV-09  
VXX2532  
(CU-DV011)

For DV-S9  
VXX2525  
(CU-DV010)

## Batteries....2



Other included items:

- **Warranty card**  
(Region number ① models only)
- **Operating Instructions**